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**UNITED STATES DISTRICT COURT
 DISTRICT OF NEVADA**

TAHOE CABIN, LLC, a Nevada limited liability company; TAHIZZLE, LLC, a Nevada limited liability company; and, PATRICK K. WILLIS, TRUSTEE OF THE PATRICK K. WILLIS FAMILY TRUST DATED MARCH 28, 2000,

Plaintiffs,

v.

FEDERAL HIGHWAY ADMINISTRATION, an agency of the United States Department of Transportation; AMY S. FOX, Division Director, Central Federal Lands Highway Division, in her official Capacity; RYAN MATHIS, Central Federal Lands Highway Division, in his official Capacity; UNITED STATES DEPARTMENT OF AGRICULTURE; THOMAS J. VILSACK, in his official capacity as Secretary of Agriculture; FOREST SERVICE LAKE TAHOE BASIN MANAGEMENT UNIT; ERICK WALKER, in his official capacity as Forest Supervisor, Lake Tahoe Basin Management Unit; NEVADA DEPARTMENT OF TRANSPORTATION; KRISTINA SWALLOW, in her official capacity as Director of Nevada Department of Transportation; TAHOE REGIONAL PLANNING AGENCY; JOANNE MARCHETTA, in her official capacity as Executive Director of the Tahoe Regional Planning Agency; and DOES 1-25,

Defendants.

Case No.: 3:22-cv-00175

**COMPLAINT FOR DECLARATORY AND
 INJUNCTIVE RELIEF FOR VIOLATIONS
 OF THE NATIONAL ENVIRONMENTAL
 POLICY ACT AND THE
 ADMINISTRATIVE PROCEDURE ACT**

Plaintiffs Tahoe Cabin, LLC, a Nevada limited liability company ("Tahoe Cabin"); Tahizzle, LLC, a Nevada limited liability company ("Tahizzle"); and, Patrick K. Willis, Trustee of the Patrick K. Willis Family Trust dated March 28, 2000 ("Willis") (collectively, "Plaintiffs") allege the following against Defendants Federal Highway Administration, an agency of the United States Department of Transportation

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1 (“FHWA”); Amy S. Fox, Division Director, Central Federal Lands Highway Division (“CFLHD”), in her
 2 official Capacity; Ryan Mathis, CFLHD, in his official Capacity; United States Department of Agriculture
 3 (“USDA”); Thomas J. Vilsack, in his official capacity as Secretary of Agriculture; Forest Service Lake
 4 Tahoe Basin Management Unit (“LTBMU”); Erick Walker, in his official capacity as Forest Supervisor,
 5 LTBMU; Nevada Department of Transportation (“NDOT”); Kristina Swallow, in her official capacity as
 6 Director of NDOT; Tahoe Regional Planning Agency (“TRPA”); Joanne Marchetta, in her official
 7 capacity as Executive Director of the TRPA:

8 INTRODUCTION

- 9 1. The Round Hill Pines Beach Resort (“RHP”) is located on the east shore of Lake Tahoe. RHP is
 10 located within the boundary of the LTBMU and is operated by third parties subject to a special use
 11 permit. The RHP entrance/exit can be accessed only from US HWY 50.
- 12 2. Plaintiffs own property adjacent to RHP. Plaintiffs Tahoe Cabin’s and Willis’ respective properties
 13 share a boundary with RHP that extends from US HWY 50 to elevation 6,223’ Lake Tahoe datum.
 14 Like RHP, the properties owned by Plaintiffs can be accessed only from US HWY 50, at the
 15 intersection of US HWY 50 and Sierra Sunset Lane. Sierra Sunset Lane is a private road created
 16 pursuant to Douglas County Code of Ordinances § 20.300.040. At present, the RHP entrance/exit
 17 is roughly 1,600 feet from the intersection of US HWY 50 and Sierra Sunset Lane.
- 18 3. The FHWA-CFLHD, in cooperation with the USDA, LTBMU, NDOT, and TRPA, is undertaking
 19 a project to relocate the current RHP entrance/exit approximately 0.2 miles (1,056 feet) north from
 20 the existing entrance/exit road (the “RHP Project”). The FHWA-CFLHD claims the RHP Project
 21 is needed “because the current US 50 entrance configuration into [RHP] has safety concerns due
 22 to limited sight distance for vehicles traveling in both directions along US 50 and unprotected
 23 turning movements across US 50,” *See*, FONSI, Appendix F, Purpose and Need Statement.
 24 Construction on the RHP Project has not yet commenced.
- 25 4. Despite its stated purpose (to increase safety), the RHP Project significantly reduces safety at the
 26 intersection of US HWY 50 and Sierra Sunset Lane, which is within the RHP Project area.
- 27 5. Since 1981, the owners of the properties accessed via Sierra Sunset Lane have benefitted from a
 28 Revocable Right of Way and Occupancy Permit issued by NDOT (the “ROW Permit”). The ROW

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- 1 Permit allowed for the construction and continued use of modified acceleration and deceleration
- 2 lanes, 130 feet in length and 9 feet in width, adjacent to US HWY 50. For over 40 years, the ROW
- 3 Permit has allowed individuals to safely enter and exit US HWY 50 from Sierra Sunset Lane.
- 4 6. The RHP Project, as currently configured, will widen US HWY 50 immediately adjacent to Sierra
- 5 Sunset Lane. This widening of US HWY 50 will destroy the protective acceleration and
- 6 deceleration lanes created and preserved for over 40 years by the ROW Permit. The widening of
- 7 US HWY 50 immediately adjacent to Sierra Sunset Lane creates additional safety and accessibility
- 8 concerns (other than those at the RHP entrance/exit), worsens already limited sight distances at
- 9 Sierra Sunset Lane, and endangers all drivers along the US HWY 50 corridor due to unprotected
- 10 turning movements to and from Sierra Sunset Lane.
- 11 7. Moreover, in the present design, the RHP Project includes an acceleration lane for those exiting
- 12 RHP onto US HWY 50 northbound (left turn) and a modified left-hand turn lane for those wishing
- 13 to enter Sierra Sunset Lane. This short distance “end of merge” to vehicle stopped in a left hand
- 14 turn lane is a definite set up for a rear-end, high-speed collision, which is the very problem that
- 15 FHWA-CFLHD is hoping to alleviate at the RHP intersection.
- 16 8. The RHP Project is a major federal action significantly affecting the quality of the human
- 17 environment, in that it is jeopardizing human lives. Despite this, on May 18, 2021, the FHWA-
- 18 CFLHD issued a Joint Environmental Assessment on the RHP Project (the “EA”) finding that the
- 19 impacts of the RHP Project were less than significant. On October 1, 2021, following the comment
- 20 period, FHWA-CFLHD submitted its Finding of No Significant Impact (“FONSI”) pursuant to 42
- 21 U.S.C. 4332 (2)(c) and 49 U.S.C. 303.
- 22 9. Both the EA and FONSI ignore the significant and adverse impacts the RHP Project will have on
- 23 the US HWY 50 and Sierra Sunset Lane intersection. To date, FHWA-CFLHD has refused to
- 24 conduct any traffic study or similar analysis related to the RHP Project.
- 25 10. Defendants must be prohibited from continuing the RHP Project until they fully comply with
- 26 NEPA by preparing an environmental impact statement that accounts for and mitigates the RHP
- 27 Project’s impact on the US HWY 50 and Sierra Sunset Lane intersection as required by federal
- 28 law.

PARTIES**Plaintiffs**

11. Plaintiff Tahoe Cabin, LLC, is a Nevada limited liability company. Tahoe Cabin is the owner of certain real property located in Douglas County, Nevada commonly known as 530 Sierra Sunset Lane, Zephyr Cove, Assessor's Parcel Number 1318-15-201-001 ("530 Sierra Sunset"). The members and managers of Tahoe Cabin, their family, guests, employees, and invitees frequently stay at and make use of 530 Sierra Sunset. 530 Sierra Sunset is accessed by Sierra Sunset Lane, which intersects with US HWY 50. The RHP Project directly impacts Tahoe Cabin's ability to safely access and/or exit US HWY 50 from Sierra Sunset Lane.
12. Plaintiff Tahizzle, LLC, is a Nevada limited liability company. Tahizzle is the owner of certain real property located in Douglas County, Nevada commonly known as 540 Sierra Sunset Lane, Zephyr Cove, Assessor's Parcel Number 1318-15-201-002 ("540 Sierra Sunset"). The members of Tahizzle, their family, guests, employees, and invitees reside, frequently stay at, and make use of 540 Sierra Sunset. 540 Sierra Sunset is accessed by Sierra Sunset Lane, which intersects with US HWY 50. The RHP Project directly impacts Tahizzle's ability to safely access and/or exit US HWY 50 from Sierra Sunset Lane.
13. Patrick K. Willis, Trustee of the Patrick K. Willis Family Trust dated March 28, 2000, is the owner of certain real property located in Douglas County, Nevada commonly known as 550 Sierra Sunset Lane and 560 Sierra Sunset Lane, Zephyr Cove, Assessor's Parcel Number 1318-15-101-009 and 1318-15-201-003 ("550/60 Sierra Sunset"). Willis, his family, guests, employees, and invitees reside, frequently stay at, and make use of 550/560 Sierra Sunset. 550/560 Sierra Sunset is accessed by Sierra Sunset Lane, which intersects with US HWY 50. The RHP Project directly impacts Willis' ability to safely access and/or exit US HWY 50 from Sierra Sunset Lane.

Defendants

14. Defendant Federal Highway Administration, an agency of the United States Department of Transportation. FHWA-CFLHD is the lead agency for the RHP project with respect to NEPA and is charged with the duty of ensuring compliance with NEPA and other applicable federal laws.

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- 1 15. Amy S. Fox, is sued in her official capacity as Division Director for CFLHD, responsible for all
2 CFLHD activities. In her official capacity, she has the responsibility of ensuring that the CFLHD
3 acts in accordance with applicable laws and regulations.
- 4 16. Defendant Ryan Mathis, CFLHD, is sued in his official capacity as Project Manager for the RHP
5 Project, overseeing all RHP Project actions and the official responsible for preparation of the EA
6 FONSI, and the subsequent failure to prepare and issue an EIS.
- 7 17. United States Department of Agriculture is an agency of the United States Government. The
8 USDA is the federal agency responsible for overseeing federal rural development programs.
- 9 18. Thomas J. Vilsack is sued in his official capacity as Secretary of Agriculture, responsible for all
10 USDA activities. In his official capacity, he has the responsibility of ensuring that the USDA acts
11 in accordance with applicable laws and regulations.
- 12 19. Forest Service Lake Tahoe Basin Management Unit is a an office within the United States Fores
13 Service ("USFS"), an agency within the USDA,
- 14 20. Erick Walker is sued in his official capacity as Forest Supervisor of the LTBMU, responsible for
15 all LTBMU activities. In his official capacity, he has the responsibility of ensuring that the
16 LTBMU acts in accordance with applicable laws and regulations.
- 17 21. Nevada Department of Transportation is an agency of the State of Nevada. NDOT is responsible
18 for maintaining and improving Nevada's highway system, which includes US highways such as
19 US HWY 50.
- 20 22. Kristina Swallow is sued in her official capacity as Director of NDOT, responsible for all NDOT
21 activities. In her official capacity, she has the responsibility of ensuring that NDOT acts in
22 accordance with applicable laws and regulations.
- 23 23. Tahoe Regional Planning Agency is a bi-state (California/Nevada) agency created in 1980 by a
24 federal statute entitled the Tahoe Regional Planning Compact. The Compact vests authority in
25 TRPA to adopt and enforce a regional plan and implementing ordinances to maintain
26 environmental standards within the Tahoe Basin.
- 27 24. Joanne Marchetta is sued in her official capacity as Executive Director of the TRPA, responsible
28 for all TRPA activities. In her official capacity, she has the responsibility of ensuring that TRPA

acts in accordance with applicable laws and regulations.

JURISDICTION AND VENUE

25. This Court has subject matter jurisdiction under 28 U.S.C. §1331 (federal question), 28 U.S.C. §1361 (action to compel an officer of the United States to perform his/her duty), and 28 U.S.C. §§2201-2202 ("creation of remedy" and "further relief" provisions establishing power to issue declaratory judgments in case of actual controversy). Plaintiff has a right to bring this action pursuant to, inter alia, the Administrative Procedure Act ("APA"), 5 U.S.C. §§701-706 and 28 U.S.C. §139(k)-(l).

26. Venue is proper in the United States District Court for the District of Nevada under 28 U.S.C. §1391 because Plaintiffs live in the District, the land affected by the action is located in the District, and a substantial part of the acts or omissions giving rise to this Complaint occurred in the District.

LEGAL BACKGROUND

National Environmental Policy Act

27. Congress enacted NEPA in 1969. NEPA is our nation's basic charter for environmental protection

28. Congress enacted NEPA for two central purposes. First, Congress sought to ensure that all federal agencies examine or take a "hard look" at the environmental impacts of their actions before acting. Second, Congress sought to provide the public with a statutory means to be informed about, and to comment on, the environmental impacts of proposed agency action. NEPA requires federal agencies to analyze the environmental impact of a particular federal action before proceeding with that action. 42 U.S.C. § 4332(2)(c).

29. Accordingly, before a federal agency can act in a way that significantly affects the quality of the human environment, NEPA requires the acting agency to prepare a detailed environmental impact statement ("EIS") that discusses, among other things: "(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, [and] (iii) alternatives to the proposed action." 42 U.S.C. § 4332(2)(c)

30. The EIS is the cornerstone of NEPA. An EIS is required for all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(c). The requirement to

1 prepare an EIS is broad and intended to compel agencies to take seriously the potential
2 environmental consequences of a proposed action.

3 31. The Council on Environmental Quality (CEQ) promulgated uniform regulations to implement
4 NEPA that are binding on all federal agencies. 42 U.S.C. § 4342; 40 C.F.R. §§ 1500 et seq..

5 32. Individual agencies supplement the CEQ regulations with agency-specific regulations. NEPA
6 regulations applicable to FHWA actions are set forth at 23 C.F.R. Part 771.

7 33. The CEQ regulations direct federal agencies to “[u]se the NEPA process to identify and assess the
8 reasonable alternatives to proposed actions that will avoid or minimize adverse impacts of these
9 options upon the quality of the human environment.” 40 C.F.R. §1500.2(e).

10 34. CEQ regulations describe two forms of environmental review under NEPA: Environmental
11 Assessments (“EA”) and EIS. An Environmental Assessment is “a concise public document for
12 which a Federal Agency is responsible,” and is used to assist an agency in determining whether
13 a proposed activity will significantly affect the quality of the human environment. 40 C.F.R. §
14 1508.9. Where more significant environmental concerns are raised by the proposed action, an
15 Environmental Impact Statement may be required. *Id.* § 1501.4.

16 35. When it is not clear whether an action requires the preparation of an EIS, the regulations direct
17 agencies to prepare a document known as an environmental assessment (“EA”) in order to
18 determine whether an EIS is required. 40 C.F.R. §§ 1501.4(b), 1508.9. An EA is a “concise public
19 document” that must “briefly provide sufficient evidence and analysis for determining whether to
20 prepare an environmental impact statement or a finding of no significant impact.” 40 C.F.R. §
21 1508.9(a). An EA “shall include brief discussions of the need for the proposal, of alternatives as
22 required by section 102(2)(E), of the environmental impacts of the proposed action and
23 alternatives, and a listing of agencies and persons consulted.” 40 C.F.R. § 1508.9(b).

24 36. An EA must take a “hard look” at the potential consequences of its actions and provide enough
25 evidence and analysis for determining whether to prepare an EIS. Agencies must involve the
26 public, to the extent practicable, in preparing this assessment. 40 C.F.R. § 1501.4(b).

27 37. According to CEQ regulations, determining whether an action is “[s]ignifican[t]” for purposes of
28 preparing an EA or EIS requires “considerations of both context and intensity[.]” 40 C.F.R. §

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1508.27. Because significance “varies with the setting of the proposed action,” “context” includes consideration of “society as a whole,” an “affected region,” and “the locality,” as well as “affected interests.” *Id.* § 1508.27(a). The “intensity” prong of the significance analysis relates to “the severity of the impact.” *Id.* § 1508.27(b). “Intensity” factors include, inter alia: the “degree to which the proposed action affects public health or safety”; “[u]nique characteristics of the geographic area” such as wetlands, wild and scenic rivers, or ecologically critical areas; the degree to which effects on the human environment will be “controversial”; the degree to which effects on the human environment are “highly uncertain or involve unique or unknown risks”; whether the action is “related to other actions with individually insignificant but cumulatively significant impacts”; how the action may affect “significant scientific, cultural, or historical resources”; how the action may adversely affect an endangered or threatened species or its critical habitat; and whether the action threatens a violation of federal, state, or local environmental laws. *Id.*

38. 40 C.F.R. § 1508.14 states that “Human Environment” “shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of “effects” (Sec. 1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.”

39. If, based on an EA, an agency determines that an action may have a significant environmental impact, the agency must prepare an EIS. 40 C.F.R. § 1501.4(c). If the agency determines that the impacts will not be significant, the agency must prepare a Finding of No Significant Impact (“FONSI”). 40 C.F.R. § 1501.4(e); 40 C.F.R. § 1508.13.

40. If the agency decides the impacts are not significant, it must supply a convincing statement of reasons why, and make its finding of no significant impact available to the public. 40 C.F.R. § 1501.4(c).

41. A significant effect may exist even if the federal agency believes that on balance the effect will be beneficial. 40 C.F.R. § 1508.27(b)(1).

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42. Whether in an EA or EIS, an agency must adequately evaluate all potential environmental impacts of the proposed action. 42 U.S.C. § 4332(2)(c). To meet this obligation, the federal agency must identify and disclose to the public all foreseeable impacts of the proposed action, including direct, indirect, and cumulative impacts. See *Id.* § 4332(2); see also 40 C.F.R. §§ 1508.7- 1508.8.

43. After preparing an EA or EIS, an agency may not simply rest on the original document. The agency must gather and evaluate new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its future planned actions. See, *Friends of the Clearwater v. Dombeck*, 222 F.3d 552,557 (9th Cir. 2000).

44. The agency must take a “hard look” at identifying and evaluating potential adverse environmental impacts. *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1376 (9th Cir. 1998). An action will be set aside as arbitrary or capricious if the agency can identify no “rational connection between the facts found and the choice made;” that is, if the “explanation for its decision [ran] counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

Administrative Procedure Act

45. Judicial review of federal agency action is governed by the Administrative Procedure Act (“APA”), 5 U.S.C. § 551 et seq. Under the APA, courts “shall hold unlawful and set aside” agency action, findings, or conclusions found to be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law” or “without observance of procedure required by law.” 5 U.S.C. § 706(2)(A), (D).

Declaratory Judgment Act

46. The Declaratory Judgment Act, 28 U.S.C. §§2201-02, authorizes “any court of the United States” to “declare the rights and other legal relations of any interested party seeking such declaration.”

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FACTUAL BACKGROUND

- 1
- 2 47. On March 27, 2019, the FHWA-CFLHD issued a Public Information Meeting Notice regarding
- 3 the proposed RHP Project. The Notice advised that an informational meeting would be held on
- 4 April 23, 2019, and described the RHP Project as follows: “[t]he Proposed Action is to improve
- 5 safety for visitors entering and existing the Round Hill Pines Resort from U.S. Highway 50 (US
- 6 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing
- 7 entrance into the resort and extends along US 50 for approximately 1 mile.” In the Notice, the
- 8 FHWA-CFLHD advised that it was conducting an EA as part of the NEPA process and, as such,
- 9 would “investigate existing transportation conditions, and identify and evaluate potential
- 10 environmental impacts of a preferred alternative.” The Notice invited “those interested in or
- 11 affected by this project... to make their concerns known.”
- 12 48. On April 1, 2019, Plaintiffs contacted Tomas W. Parker, the then Project Manager/COE of the
- 13 RHP Project for the FHWA-CFLHD. Plaintiffs informed Mr. Parker of their concerns regarding
- 14 the potential relocation of the RHP entrance/exit. In response, Mr. Parker advised Plaintiffs that
- 15 the FHWA-CFLHD was early in the design stage and the purpose of the April 23, 2019, meeting
- 16 was to solicit input from members of the public.
- 17 49. On April 23, 2019, Plaintiffs attended FHWA-CFLHD’s Public Information Meeting. At the
- 18 meeting, FHWA-CFLHD claimed no decisions had been regarding the design of the project and
- 19 stressed that safety for all was of paramount importance. During the meeting, Plaintiffs, in writing
- 20 and orally, expressed concern for the safety of those entering/exiting US HWY 50 via Sierra
- 21 Sunset Lane.
- 22 50. On September 9, 2019, the FHWA-CFLHD issued a second Public Information Meeting Notice
- 23 regarding the proposed RHP Project. The Notice advised that an informational meeting would be
- 24 held on September 25, 2019, and described the RHP Project as follows: “[t]he project begins south
- 25 of the existing entrance into the resort and extends north along US 50 for approximately 0.35 mile.
- 26 The project is located in Douglas County near Zephyr Cove, Nevada.” The second Notice was
- 27 accompanied by a flier that described three different options for the RHP Project. The Notice
- 28 further advised, “[t]his public meeting is intended to provide those interested in or affected by this

project with an opportunity to review the improvement options and make comments.”

51. On the morning of September 25, 2019, Plaintiffs met with representatives of the FHWA-CFLHD at Sierra Sunset Lane to discuss the proposed RHP Project. Plaintiffs and the representatives of the FHWA-CFLHD walked the area between Sierra Sunset Lane and the proposed RHP access road. The representatives of the FHWA-CFLHD advised Plaintiffs that the new RHP access road would be roughly 800 feet south of the Sierra Sunset Lane and US HWY 50 intersection.

52. In the evening of September 25, 2019, Plaintiffs attended and participated in the second Public Information Meeting hosted by the FHWA-CFLHD.

53. On May 28, 2021, the FHWA-CFLHD issued a Notice of Availability of Environmental Assessment. This Notice described the RHP Project as follows: “[t]he project would provide a new access road into the Round Hill Pines Resort for visitors. The new access road would be located approximately 0.2 mile north from the existing access road. The project would also improve access to the Round Hill Pines Resort for visitors traveling along US 50 with a median left turn and acceleration lane along northbound US 50. Additional improvements include pavement resurfacing, lane striping and drainage improvements.” The Notice further advised that the EA would be open for comments for 30 days, from May 28, 2021, until June 27, 2021.

54. The EA completely fails to address the environmental impacts of the RHP Project on the intersection of Sierra Sunset Lane and US HWY 50, which falls well within the RHP Project area. As it relates to Sierra Sunset Lane, the EA is limited to the following statements:

- 3.3.3-Environmental Consequences and Mitigation Measures-"The area analyzed encompasses the 0.35-mile segment of US 50, approximately 500 feet southeast of the original entrance road and continues along US 50 to approximately 130 feet north of the intersection of Sierra Sunset Lane and US 50."
- 3.9.2 Affected Environment/3.9.2.1 Study Area Roadways...."Sierra Sunset Lane is a private drive that provides access to private property."
- 3.9.2.2 Intersection Configuration...."The U.S. 50/Sierra Sunset Lane intersection is an unsignalized intersection with no posted traffic control. Currently, there are no turn lanes provided along US 50."
- 3.9.2.6 Roadway Traffic Volumes-"US 50, 220 ft. west of Sierra Sunset Lane/19,800 (Average Daily Traffic Volumes).

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- 3.10.2-Sources and Ambient Levels-"The noise study area is located along a segment of US 50 with scattered residential development and recreational use facilities associated with the Round Hill Pines Resort. Private residences are located along Sierra Sunset Lane and at Round Hill Village (east of US 50) between 250 and 400 feet from the nearest travel lane. The noise environment within the study area is predominately influenced by vehicular traffic along US 50 and visitors entering and exiting the Round Hill Pines Resort. Less pronounced noise sources in the area include recreational activities on the Round Hill Pines Resort (people talking and boat activities).

Existing traffic noise levels were modeled for US 50 within the study area in accordance with the FHWA's approved Traffic Noise Model (TNM) 2.5 as well as NDOT noise guidelines. Traffic noise modeling results are based on existing average daily traffic (ADT) volumes and speeds from NDOT (NDOT 2016). Modeling assumes no natural or human-made shielding. The extent to which land used are affected by existing traffic noise depends on their respective proximity to US 50 and sensitivity to noise.

On July 22, 2019, noise measurements were taken at four locations within the study area to determine ambient noise levels, see Figure 3.10-1 showing the locations of the field measurements. Short-term noise readings were collected for 15 minutes for each event as required by NDOT. Traffic counts, by vehicle type, were collected simultaneously with the noise measurements. Operating speeds and existing geometry were also collected and input into the FHWA-approved TNM 2.5 for validation, see Traffic Noise Study (Jacobs, 2021) in Appendix A."

55. On June 23, 2021, Plaintiffs submitted a letter to the FHWA-CFLHD, via the Project Manager, Ryan Mathis, regarding their concerns. Specifically, Plaintiffs advised the FHWA-CFLHD and Mr. Mathis that:

- the proposed relocation of the RHP entrance does not just affect/threaten the safety of the people entering/exiting Sierra Sunset Lane, but it would also affect the safety of everyone who would be entering/exiting the proposed new RHP entrance and others traveling on US HWY 50;
- Section 3.9, Transportation, of the EA, claims to describe "the potential impact to transportation and traffic on and around the Project corridor that might be expected from implementation of the Proposed Project Alternative" and concludes that "[t]he project would not cause a substantial adverse effect upon the existing transportation system or alter existing traffic patterns, or increase traffic hazards."

The proposed location of the new Round Hill Pines entrance is roughly 550' to the south of Sierra Sunset Lane. The EA does not discuss the impacts to and on the intersection at Sierra Sunset Lane. Notably, how will the proposed new Round Hill Pines entrance affect the existing southbound acceleration lane from Sierra Sunset Lane and along westbound US HWY 50? And, will the proposed new Round Hill Pines entrance make it difficult for emergency service providers to access the properties located on Sierra Sunset Lane as traffic stacks up along US HWY 50, blocking access to the Sierra Sunset Lane entrance? And, how will the proposed new Round Hill Pines entrance affect those turning left/northbound onto US HWY 50 from Sierra Sunset Lane (limited sight distance coupled with the possibility of new acceleration lane seems like a recipe for disaster)? Without addressing these questions or discussing the potential impacts of the Sierra Sunset Lane intersection, how can the EA conclude that "the project would not....increase traffic hazards"?

Until a complete analysis is performed (one that includes a study of the impacts of the proposed new Round Hill Pines entrance on the Sierra Sunset Lane Intersection), a statement of "no significant impact" cannot be made. The FHWA-CFLHD's EA is incomplete, at least with respect to its findings in Section 3.9, and its conclusions are, therefore, inaccurate. More importantly, the findings, if followed, will almost certainly increase traffic hazards along US HWY 50.

56. On October 7, 2021, Ryan Mathis contacted Plaintiffs to advise that the FHWA-CFLHD had completed its FONSI for the RHP Project, and a memorandum addressing the project's impact on Sierra Sunset Lane's intersection with US HWY 50, as it pertains to safety and accessibility, was included in the same as Appendix B.

57. The Memorandum attached to the FONSI as Appendix B makes the following conclusions that:

- The [RHP Project] improves safety and accessibility to federal lands by providing safer ingress/egress for [RHP]; and,
- None of the "improvements" associated with the RHP Project "negatively affect the safety of Sierra Sunset Lane at the intersection of US 50."

The FHWA-CFLHD arrived at these conclusions without taking a "hard look" at the potential consequences of its actions on the safety of Sierra Sunset Lane at the intersection of US HWY 50. The FONSI and the EA are bereft of any analysis or evidence supporting the finding of "no significant impact."

58. On October 15, 2021, Plaintiffs received a Notice of Application and Public Hearing from TRPA in connection with the RHP Project. The FHWA-CFLHD was seeking TRPA approval for an Environmental Improvement Program permit in connection with the RHP Project. The public hearing was scheduled for October 27, 2021. Prior to the Public Hearing, Plaintiffs submitted a letter of opposition to the TRPA Governing Board.

59. On October 27, 2021, Plaintiffs attended and participated in the TRPA Governing Board Public Hearing on the RHP Project. During the meeting, Plaintiffs expressed their concerns regarding the flawed and incomplete EA, prepared by the FHWA-CFLHD with the assistance of TRPA, and the FONSI. Plaintiffs advised TRPA that the RHP Project would have a significant, adverse impact on the intersection at Sierra Sunset Lane and US HWY 50. Plaintiffs asked TRPA to withhold approval of any permits until the FHWA-CFLHD had completed a proper and thorough analysis of the impact the RHP Project would have on the intersection at Sierra Sunset Lane and US HWY 50.

1 TRPA issued the permit to the FHWA-CFLHD subject to the condition that the FHWA-CFLHD
2 meet with Plaintiffs to further discuss the RHP Project.

3 60. Plaintiffs met with the RHP Project team, which included representatives from the
4 FHWA-CFLHD, LTBMU, NDOT, and TRPA, on November 18, 2021, and January 14, 2022. The
5 meetings did not alleviate Plaintiffs' concerns.

6 61. Following the meetings with RHP Project Team, Plaintiff engaged the services of James C. Jeffery
7 III, P.E. PTOE. Mr. Jeffery is a registered Civil Engineer (Professional Engineer License No. 1179,
8 California) and a registered Traffic Engineer (Professional Engineer License No. 36644,
9 California). Mr. Jeffery is also a General Engineering Contractor (License No. 391026). He holds
10 BS Degrees in Engineering Management and Environmental Studies. Mr. Jeffery is also a
11 Professional Traffic Operations Engineer (License No. 197, Transportation Professional
12 Certification Board).

13 62. Plaintiffs asked Mr. Jeffery to review the RHP Project, specifically its impact on vehicular safety
14 at the intersection of Sierra Sunset Lane and US HWY 50. Mr. Jeffery prepared a written report
15 that contains his findings and conclusions. A copy of Mr. Jeffery's report is attached hereto as
16 **Exhibit 1.**

17 63. In his report, Mr. Jeffery makes the following observations:

- 18 • ***The FONSI was written, discussed and adopted with only 30% of the plans for***
19 ***the [RHP] Project being completed....*** The 100% plans were not considered in the
20 FONSI, nor apparently deemed necessary to be considered in the FONSI...only in
21 the 100% plans is there a review of the required submission and approval of a
22 Traffic Control Plan... the 100% plans call for 30-min delays, which in my
23 experience is unheard of and is excessively long, and there was no apparent
24 queuing analysis performed to see how long the queues might be and how that
25 might affect traffic and access along the affected portion of Nevada US 50.
- 26 • ***The FONSI did not initially discuss or even mention the intersection of Sierra***
27 ***Sunset Lane with US 50,*** even though it is shown as being within 'project limits'
28 in all or nearly all of the exhibits and plans. Purportedly, safety is the overriding
reason for the re-location of the main entrance of; it is...unclear...why there was no
safety evaluation that was even considered for Sierra Sunset Lane.
- The FHWA design conforms to a Freeway design type...this [is] extremely
inappropriate...TRPA noted in its comment memo that, "RTP Policy 4.8: prohibits
the construction of roadways to freeway design standards in the Tahoe Region."
Mr. Jeffery has not encountered this type of design style at any time in his career.
An Engineer is supposed to use design characteristics that must match the
Functional class of the roadway or have a 'design exception', which apparently has
not been provided.

- the radius of the curve around the Sierra Sunset Lane US 50 curve is labeled on page C04 (201/464.pdf) of the plans as having a radius of 980.00 feet. This same curve is labeled in another place on the plans, again in the same exact location, as a 1000 foot radius (378/464.pdf). At Appendix 'D' to Appendix 'B' shows the '2014 Roadway Plan' with 1000 ft radius.

64. More importantly, Mr. Jeffery noted several, major design flaws that significantly impact the human environment by endangering human lives on US HWY 50:

- Beginning with sight distance, the FHWA memo (348/464.pdf) states that "existing" sight distances (page 3) are 610 feet from the south, and 500 feet from the north. This does not conform with this memo's own reference to its "Sierra Sunset Lane Intersection Sight Distance Exhibit" in Appendix 'F' (384-385/464.pdf). That appendix drawing shows the above figures as 'calculated', that is to say, what sight distance should be optimally. However, there was no explanation as to why Sierra Sunset Lane calculated sight distance (same road, same speed) was not the EXACT SAME at the re-located RHP access at calculated 588 feet, and 655 feet provided. So, for the EXACT SAME REASONS that is cited for having the improved access to RHP, improving inadequate sight distance for safety reasons, FHWA is not providing for the same safety requirements for Sierra Sunset Lane for all vehicles. The same 'requirement' of at least 588 feet calculated sight distance HAS TO BE MADE in order to accommodate the SAME EXACT Design Vehicle at Sierra Sunset Lane. So, the FHWA memo (348/464.pdf) is stating that for safety purposes the sight distance necessary at Sierra Sunset Lane needs to be 610 feet from the south, and 500 feet from the north. The memo continues stating that the existing sight distance to the south is far exceeded, but the sight distance to the north is only presently 400 feet, and the memo continues:

The sight distance to the north could be improved by removing trees outside of the NDOT right-of-way, but since the purpose of this project is to improve safety and accessibility to federal lands, tree removal on private property is beyond the scope of this project.

This Engineer has never seen a safety issue dismissed with such callousness. FHWA refuses clear sight distance for all drivers of US 50. Specifically, the northern sight distance at Sierra Sunset Lane at US 50 makes the safety issue even worse with the proposed project. Sierra Sunset Lane's southbound (S/B) decel and accel refuge safety lanes already have slightly substandard design. In addition to worsening the existing Sierra Sunset Lane southbound (S/B) decel and accel refuge safety lanes, the proposed project will 'push' the S/B travel lanes westward (towards Sierra Sunset Lanes) 3-6 feet, thereby bringing passer-by traffic not destined for Sierra Sunset closer to Sierra Sunset Lane exiting traffic - with additional negative safety impacts of respective narrowing and shortening of Sierra Sunset Lane decel and accel refuge safety lanes, and taking them further out of compliance with standard engineering design considerations.

- Any unsafe aspects of the access to/from Sierra Sunset Lane in the proposed projects are also potentially unsafe for users of RHP. *If a tragic accident were to happen to someone trying to enter/exit Sierra Sunset Lane, then it is likely that someone trying to enter/exit RHP would also be involved.*
- In the present design, the driver of a vehicle accelerating and attempting to merge from the RHP access northbound (N/B) must look over their right shoulder (and hopefully not 'just' look into the rearview mirror) to judge the location and safety of merging with on-coming traffic in lane number one and/or to even determine if

on-coming traffic is in lane number one or lane number two. As a result, as soon as the driver of the merging driver faces forward, they could be confronted with a left-turning vehicle in lane number one who is stopped and waiting to enter Sierra Sunset Lane. This short distance 'end of merge' to a vehicle possibly stopped in lane number one, is a definite set-up for a rear-end collision - which is the very problem that FHWA is hoping to alleviate at the RHP entrance/US 50 intersection.

66. On January 19, 2022, the FHWA-CFLHD put the RHP Project out for bid. The bid deadline closed on March 22, 2022. Plaintiffs expect Defendants to commence work on the RHP Project shortly.

67. The EA, FONSI, and almost all supporting documentation provided by Defendants in connection with the RHP Project show the intersection at Sierra Sunset Lane and US HWY 50 as being within the RHP Project area. Despite this, Defendants have completely ignored the significant impact the RHP Project will have on Sierra Sunset Lane and, as a result, on all vehicles traveling that particular section of US HWY 50.

68. NDOT has been actively soliciting public input for its US HWY 50 Corridor Management Plan. This plan focuses on safety improvements at Spooner Summit and the Nevada-California border at Stateline, Nevada. The RHP Project is part of this plan. In a recent news article advertising NDOT's plan and desire for public feedback, it was noted that, "[a]verage daily peak-season traffic on the [HWY 50] has grown from 15,000 vehicles daily in 2014 to nearly 20,000 in 2019. *During a recent 4-year period, crash rates were more than 50% higher on US 50 between Elks Point Road and Glenbrook Drive when compared with other similar highways across the state.*" (Emphasis added). A copy of the Tahoe Daily Tribune article is attached hereto as **Exhibit 2**.

69. The RHP Project is located just north of Elks Point Drive.

70. The FHWA-CFLHD is aware of the significant increase in traffic. It is aware of the significant increase in crash rates. Despite this knowledge, the FHWA-CFLHD is willing to bury its head in the sand and claim "no significant impact" in order to push the RHP Project forward.

71. The FHWA-CFLHD has not provided any analysis or evidence to support its claims of "no significant impact." Its claims are hollow and unsubstantiated. NEPA requires much more. The EA and subsequent FONSI are statutorily deficient.

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**FIRST CAUSE OF ACTION
(Violation of NEPA and APA)**

72. Plaintiff hereby incorporates by reference and realleges each and every allegation above.

73. Defendants violated NEPA and its implementing regulations, 40 C.F.R. Part 1500 and 23 C.F.R. Part 771, and the APA because they:

- Failed to take the requisite “hard look” at the significant impacts to the human environment caused by RHP Project and available alternatives, specifically the significant impact on human life and safety at the Sierra Sunset Lane and US HWY 50 intersection;
- Did not study, disclose, or mitigate the impacts of the RHP Project on the intersection at Sierra Sunset Lane and US HWY 50;
- Predetermined that the RHP Project would “not negatively affect the safety of Sierra Sunset Lane at the intersection of US 50”;
- Based its findings off of incomplete and inaccurate information, specifically its FONSI determination being made on 30% plans; and,
- Failure to perform a traffic analysis or similar type of study to adequately determine the RHP Project’s impact on the Sierra Sunset Lane and US HWY 50 intersection.

74. The EA prepared by Defendants does not provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact, as it wholly and purposefully ignores the RHP Project’s impact on the Sierra Sunset Lane and US HWY 50 intersection.

75. If Defendants has complied with NEPA, an EIS would have been required.

76. Defendants acted arbitrarily and capriciously in approving the RHP Project based on a factual record that contains both questionable data and gaping omissions.

77. Such actions were arbitrary, capricious, and an abuse of discretion in violation of NEPA, its implementing regulations, and the APA.

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PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully requests that this Court grant the following relief:

1. Declare that Defendants violated NEPA and the APA by failing to prepare an EIS;
2. Issue an injunction requiring Defendants fully comply with the provisions of NEPA including but not limited to preparation of an EIS, and specifically to ensure that Defendants take no further actions toward proceeding with the RHP Project until they have fully complied with applicable law;
3. Declare the FONSI invalid;
4. Award Plaintiff the costs of this action, including its reasonable attorneys' fees; and,
5. Grant Plaintiff such further and additional relief as this Court deems just and proper.

Date: April 15, 2022

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By:


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EXHIBIT

1

EXHIBIT

1

A. Introduction and Retention

This Engineer's Report regards the Round Hill Pines & Resort (hereinafter, 'RHP') located in Zephyr Cove, Nevada. The Federal Highway Administration (hereinafter, 'FHWA') is the Project Lead Agency in the design of the Round Hill Pines Access Project, a project which is a proposal to relocate the entrance of RHP further north along US 50. Specifically, this Engineer's Report addresses issues within FHWA's Finding of No Significant Impact (hereinafter, 'FONSI'), the latest revision of which is entitled "US Highway 50 Round Hill Pines & Resort", nv-flap-us-501-round-hill-pines-fonsi-10_1_2021.pdf.

I have been retained by concerned residents of Sierra Sunset Lane through their representative, Mr. Richard McGuffin, Esq., of Alling & Jillson, Ltd. The purpose of my retention is to assist the eventual trier of fact in their evaluation of the reasonableness of the conditions of vehicular safety in and around the proposed relocation of the entrance to RHP within the 'Round Hill Pines Access' Project. This Report will focus solely on the issues related to vehicular traffic within the FONSI and will not address any possible issue with pedestrian or bicycle traffic. Specifically, this Report will comment on conditions to be modified as a 'safety improvement' of the proposed project, as called for in Appendix 'F' to the FONSI, entitled 'Purpose and Need Statement', and quoted below:

The project is needed because the current US 50 entrance configuration into the Round Hill Pines Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50.

This Engineer will consider the entirety of the proposed 'safety improvements' and their impact on vehicular safety of the project as a whole, whether inside or outside of described 'project limits', as the description of the limits of the project varies from document to document. It is my understanding that the 'Round Hill Pines Access' Project is merely one part of a much larger project to improve the vehicular safety along the Nevada US 50 corridor. It is, therefore, incumbent upon all parties to carefully consider all potential impacts of this project along at least the roadway features in close proximity to the proposed RHP access. The project has been defined variously as between certain engineering limits which may or may not been defined in the project scope as including or not including Sierra Sunset Lane. Regardless of that definition, Sierra Sunset Lane and its access WILL BE IMPACTED either within or outside of the project limits stated or unstated in the FONSI and as further discussed and explained.

This particular portion of Nevada US 50 is labeled, for construction stationing purposes, as Beginning Station 17+00 to Ending Station 35+00, and is a length of approximately one-half mile. The location of Sierra Sunset Lane on the plans is at approximately Station 33+20, obviously within the project limits as shown above. US 50 is, historically, one of the first paved roads and first transcontinental roadway in the United States; it was formerly called the Lincoln Highway, and is/should be signed as such. Additionally, this

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roadway would require an analysis of its potential designation for National Scenic Byway status. This Engineer is not aware that this was even mentioned in the Nevada State Historic Preservation Office (SHPO) State Historical Officer's review letter of September 9, 2021 to Ryan Mathis, FHWA. A National Scenic Byway is a road recognized by the Federal Department of Transportation (FHWA) for one or more of six "intrinsic qualities", including archeological, cultural, historic, natural, recreational, and scenic qualities. In addition, page C01 (106/464.pdf) of the plans shows removed existing entrance walls; but of course, this removal will not be performed, as these walls have been deemed 'historic' by the Nevada State Historic Preservation Office (449/464.pdf) and therefore should not be removed.

The FONSI was written, discussed and adopted with only 30% of the plans for the 'Round Hill Pines Access' Project being completed. This Engineer has, however, obtained the 'NV FLAP US50(1) Round Hill Pines Access' plans (NV+FLAP+US50+Final+Plans+TRPA.pdf) which comprise the full, 100% completed plans 'going out to bid' package. This Engineer will attempt to note and discuss the significant differences between the 30% and 100% plans as related to Sierra Sunset Lane. The 100% plans were not considered in the FONSI, nor apparently deemed necessary to be considered in the FONSI; it may be noted that only in the 100% plans is there a review of the required submission and approval of a Traffic Control Plan (hereinafter, 'TCP'). It is interesting to note that the 100% plans call for 30-min delays, which in my experience is unheard of and is excessively long, and there was no apparent queuing analysis performed to see how long the queues might be and how that might affect traffic and access along the affected portion of Nevada US 50.

The FONSI did not initially discuss or even mention the intersection of Sierra Sunset Lane with US 50, even though it is shown as being within 'project limits' in all or nearly all of the exhibits and plans. Purportedly, safety is the overriding reason for the relocation of the main entrance of; it is therefore unclear to this Engineer why there was no safety evaluation that was even considered for Sierra Sunset Lane—that is, until the residents of Sierra Sunset Lane strongly encouraged the FHWA to consider the potential impact on said street. Since Sierra Sunset Lane wasn't considered or discussed in the original FONSI (or the Environment Assessment which was part of the FONSI), it was added in later as a memorandum under the Appendices of the FONSI as Appendix 'B'. At its conclusion the memo states "...usage of Sierra Sunset Lane access is not expected to change significantly upon completion of the Round Hill Pines Access Project". This Engineer's evaluation of this statement will follow further in this Report.

I will attempt to follow the format used by the Lead Agency for simplicity of reference purposes; however, for anyone to be able to follow the format I am using one must first, unfortunately, be able to follow the format and its use in the FONSI. The FONSI's indiscriminate use of similar multiple alpha characters referencing appendices may be confusing. For easier reference, I will, therefore, parenthesize the .pdf page number of the FONSI document – e.g. Appendix 'B' NV FLAP US 50(1) Round Hill Pines Access – Sierra Sunset Lane is memorandum (345-350/464.pdf). An additional source of confusion is that the FONSI includes multiple copies of exactly the same documents; this may be as a result of incorporating the Environmental Assessment (EA).

For further clarity I have chosen to follow as much as possible the order of the FONSI appendices in my review and comments.

In this Report I will apply the principles and practices of sound civil and traffic (transportation) planning in evaluating the physical design considerations indicated on the site plans reviewed and opine on their contribution to potential liability.

B. Author's Engineering and Professional Background

I am a registered Civil Engineer (Professional Engineer License No. 1179, California) and a registered Traffic Engineer (Professional Engineer License No. 36644, California). I am also a General Engineering Contractor (License No. 391026). I hold BS Degrees in Engineering Management and Environmental Studies. I am a Professional Traffic Operations Engineer (License No. 197, Transportation Professional Certification Board) and hold California Driver's Licenses in Classes C, A and M1.

Since 1983, I have been in private practice, offering traffic and civil engineering consulting services; in this practice I provide consultation, litigation support and expert testimony. While in private practice I have also, at various times, been a consulting City Traffic Engineer. I have worked in traffic engineering and transportation planning, in both the public and private sectors, for nearly 45 years.

I have worked on behalf of both plaintiffs and defendants, and my expert testimony has been accepted in Superior and Federal Courts in several states as well as a Canadian province.

A listing of the cases in which I have been deposed or testified as an expert at trial since 2017 along with my Curriculum Vitae will be attached to my Report, along with my expert disclosures, as Exhibit 'A' and Exhibit 'B' respectively.

My co-authored publications are:

"Implementing Road Safety Audits in North America", ITE TSC 96-01; "Survey of Traffic Circulation & Safety at School Sites", ITE TSC 4S-08; "ITE Expert Witness Information Notebook", ITE IR-099.

My hourly rate of compensation is \$450 for research, investigation, and document preparation and \$450 for testimony at deposition, arbitration, or in court. At the time of deposition, opposing counsel pays deposition fees.

This Engineer has not made an inspection of the site as if/when construction begins the scene will become transitory in nature. Since the subject at hand is one of a preliminary design issue - meaning, prior to construction - in order to be apprised of the design this Engineer has reviewed numerous documents and visual exhibits, upon which this Engineer has relied to form his opinion; these are listed in the attached document entitled "Round Hill Pines & Resort Documents Reviewed," Exhibit 'C'.

In the introduction to the final adopted version of the FONSI there is an index of five Appendices of documents, those being:

Appendix A – Round Hill Pines Access Project – Environmental Assessment with Appendices (12-344/464.pdf)

Appendix B: NV FLAP US 50(1) Round Hill Pines Access Sierra Sunset Lane Memorandum (346-423/464.pdf)

Appendix C: Public Notice Comments on the Environmental Assessment (425-446/464.pdf)

Appendix D: Section 106 and Section 4(f) Concurrence Letters (448-456/464.pdf)

Appendix E: Environmental Commitments (458-464/464.pdf)

C. Appendix A – Round Hill Pines Access Project – Environmental Assessment

However, each of these appendices has appendices of its own labeled in the same alpha system as those original/bolded above. Following will be the review and comments to those original five Appendices.

This first appendix is actually the Environmental Assessment (EA) which has been incorporated into the FONSI; at first appearance, therefore, there is nothing new to review here. Looking carefully, however, one realizes there is an Appendix 'A' to the Appendix A that is titled Intersection Sight Distance Displays (147-149/464.pdf). Of course, intersection sight distance is the main reason given for the 'Round Hill Pines Access' Project. The two drawings in this Appendix 'A' to Appendix 'A' show the existing (substandard) sight lines of the existing RHP access as well as the proposed relocated access improved sight lines. It is very important to note that the sight distance to be provided for in the proposed relocated access is 665 feet, which is more than the 588 feet calculated as being the necessary for safe sight distance. Both of these measurements will be important in future discussions.

The next appendices to Appendix 'A' that are critical to note are Appendix 'F' – Purpose and Need Statement (160-161/464.pdf), previously discussed above, and Appendix 'G' – TRPA (Tahoe Regional Planning Agency) (162-166/464.pdf). In Appendix 'G' to Appendix 'A' it is noted that the FHWA design conforms to a Freeway design type; this Engineer finds this extremely inappropriate and recommends a Highway design type as much more appropriate here. Even NDOT (Nevada Department of Transportation) agrees with this Functional classification as referenced the FONSI in Appendix 'F' 'NDOT Roadside Safety Audit December 2016' (161/464.pdf):

The functional classification of US 50 in Douglas County is Principal Arterial – Other therefore, a Freeway Design type absolutely should not be used. And further from the TRPA comment memo are the following concrete statements:

- The conceptual designs follow NDOT freeway design standards for vehicle acceleration/deceleration, traveled way, median turn bays and shoulders which is out of character with this section of road which is mountain/forest and not a freeway.
- RTP Policy 4.8: prohibits the construction of roadways to freeway design standards in the Tahoe Region
- To those ends, we request a reevaluation of the existing acceleration/deceleration lane NEPA design option be evaluated in the NEPA and in the TRPA environmental document so that safety benefits and environmental impacts can be evaluated and commented upon by NDOT and TRPA.

This Engineer has not located any response to these very specific concerns of the TRPA, an agency representing all individuals who enjoy the Tahoe Basin. This Engineer has not encountered this type of design style at any time in his career. An Engineer is supposed to use design characteristics that must match the Functional class of the roadway or have a 'design exception', which apparently has not been provided – and even if provided would not be appropriate, based on the discussion above.

The next document of note is yet again another 'Appendix 'A'' – Project Design Features (190-201/464.pdf). The plans do not specifically state the year of the design document, but we can safely assume 2014. The plans do, however, specifically state that they are only 30% plans, meaning that the plans reviewed were barely what one might consider as 'preliminary'. Only a few pages are present in the FONSI dated April 2019, which approximately three years prior to the writing of this report. And again, I do have access to the 100% plans, and have looked at a few 70% plan pages, but in order to conform my review of the specific issues/concerns raised in the original FONSI and associated documents, I must remain with this particular Appendix 'A'. At least one item to note directly is that the radius of the curve around the Sierra Sunset Lane US 50 curve is labeled on page C04 (201/464.pdf) of the plans as having a radius of 980.00 feet. This same curve is labeled in another place on the plans, again in the same exact location, as a 1000 foot radius (378/464.pdf). At Appendix 'D' to Appendix 'B' shows the '2014 Roadway Plan' with 1000 ft radius.

D. Appendix B: NV FLAP US 50(1) Round Hill Pines Access Sierra Sunset Lane Memo

An Appendix 'B' beginning at 345/464.pdf was written at the request of the Sierra Sunset Lane residents. This document turned out to be more of a planning document than an engineering document; in it, there were many safety engineering design aspects not even considered or at least looked at in enough detail. Beginning with sight distance, the FHWA memo (348/464.pdf) states that "existing" sight distances (page 3) are 610 feet from the south, and 500 feet from the north. This does not conform with this memo's

own reference to its “Sierra Sunset Lane Intersection Sight Distance Exhibit” in Appendix ‘F’ (384-385/464.pdf). That appendix drawing shows the above figures as ‘calculated’, that is to say, what sight distance should be optimally. However, there was no explanation as to why Sierra Sunset Lane calculated sight distance (same road, same speed) was not the EXACT SAME at the re-located RHP access at calculated 588 feet, and 655 feet provided. So, for the EXACT SAME REASONS that is cited for having the improved access to RHP, improving inadequate sight distance for safety reasons, FHWA is not providing for the same safety requirements for Sierra Sunset Lane for all vehicles. The same ‘requirement’ of at least 588 feet calculated sight distance HAS TO BE MADE in order to accommodate the SAME EXACT Design Vehicle at Sierra Sunset Lane. So, the FHWA memo (348/464.pdf) is stating that for safety purposes the sight distance necessary at Sierra Sunset Lane needs to be 610 feet from the south, and 500 feet from the north. The memo continues stating that the existing sight distance to the south is far exceeded, but the sight distance to the north is only presently 400 feet, and the memo continues:

The sight distance to the north could be improved by removing trees outside of the NDOT right-of-way, but since the purpose of this project is to improve safety and accessibility to federal lands, tree removal on private property is beyond the scope of this project.

This Engineer has never seen a safety issue dismissed with such callousness. FHWA refuses clear sight distance for all drivers of US 50. Specifically, the northern sight distance at Sierra Sunset Lane at US 50 makes the safety issue even worse with the proposed project. Sierra Sunset Lane’s southbound (S/B) decel and accel refuge safety lanes already have slightly substandard design. In addition to worsening the existing Sierra Sunset Lane southbound (S/B) decel and accel refuge safety lanes, the proposed project will ‘push’ the S/B travel lanes westward (towards Sierra Sunset Lanes) 3-6 feet, thereby bringing passer-by traffic not destined for Sierra Sunset closer to Sierra Sunset Lane exiting traffic – with additional negative safety impacts of respective narrowing and shortening of Sierra Sunset Lane decel and accel refuge safety lanes, and taking them further out of compliance with standard engineering design considerations.

At least the Nevada Department of Transportation (NDOT) is very aware of the Sierra Sunset Lane intersection. This because the residents’ access is defined and approved in NDOT’s (353-365/464.pdf) Appendix ‘B’ to Appendix ‘B’ - 1981 Entry Way & Access Roadway Plans permit by NDOT. Roadway Plans were submitted in 1984 as shown in 377-378/464.pdf). This permit, apparently in its entirety, is even produced as an exhibit to the FONSI as Appendix ‘E’ to Appendix ‘B’ – 2014 Revocable Application and Permit for Occupancy of NDOT Right-of-Way (379-383/464.pdf). It is this author’s understanding that the purpose of this ‘new’ permit was merely to change ownership of one of the property owners on the original 1981 permit, Appendix ‘C’, (357/464.pdf) and not to add, modify, or adjust any of the 1981 permit conditions.

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Appendix 'F' to Appendix 'B' entitled 'Sierra Sunset Lane Intersection Sight Distance Exhibit' (384-385/464.pdf) shows a 980-foot radius US 50 curve along the front of the Sierra Sunset Lane access. As previously discussed in this Report the variations of this curve radii in different engineering drawings begs a closer look to compare the two intersections. The proposed RHP relocated main entrance is on a concave curve, and the Sierra Sunset Lane access is on a convex curve. The latter is far more sensitive to sight distance concerns, yet while the calculation methodology remains the same, the complexity of the Sierra Sunset Lane convex curve is more problematic.

Appendix 'G' to Appendix 'B' – US 50 Signing and Pavement Markings plan sheet V2 (386-387/464.pdf) primarily shows the left turn refuge and accel lane for RHP again at Freeway design standards, with no left turn refuge for Sierra Sunset Lane; this design has been discussed elsewhere in the FONSI text. So, when the designer redesigns US 50 to the proper Highway standards for the Highway Functional Class, rather than the improper Freeway Functional Class, the designer creates a great safety improvement opportunity for all concerned. There will be enough safe space for the RHP left turn lane (that can stay the same as designed) in conjunction with a properly designed and therefore shortened accel lane. While still providing proper safe design standards for RHP, the additional increased safety for all vehicles will be obtained by providing a safe space for all vehicles passing and turning at Sierra Sunset Lane by providing its own separated left turn refuge lane. Unless this re-design is undertaken, the project is ACTUALLY making a very slightly substandard design worse – therefore, 'de-designing' Sierra Sunset Lane – to the supposed benefit of the project for RHP's proposed access. Any unsafe aspects of the access to/from Sierra Sunset Lane in the proposed projects are also potentially unsafe for users of RHP. If a tragic accident were to happen to someone trying to enter/exit Sierra Sunset Lane, then it is likely that someone trying to enter/exit RHP would also be involved.

I have taken a more in-depth design review of operational characteristics of the proposed FHWA design and found a more insidious condition present, which I have seen in substandard designs before. In the present design, the driver of a vehicle accelerating and attempting to merge from the RHP access northbound (N/B) must look over their right shoulder (and hopefully not 'just' look into the rearview mirror) to judge the location and safety of merging with on-coming traffic in lane number one and/or to even determine if on-coming traffic *is in* lane number one or lane number two. As a result, as soon as the driver of the merging driver faces forward, they could be confronted with a left-turning vehicle in lane number one who is stopped and waiting to enter Sierra Sunset Lane. This short distance 'end of merge' to a vehicle possibly stopped in lane number one, is a definite set-up for a rear-end collision – which is the very problem that FHWA is hoping to alleviate at the RHP entrance/US 50 intersection.

Appendix 'I' to Appendix 'B' - CFLHD Round Hill Pines Access Intersection Design Memo (395-400/464.pdf) covers much of the items previously discussed above. This comment is placed here merely for reference purposes.

SUMMARY OF FINDINGS/CONCLUSIONS

- FHWA has cited the need to remedy inadequate sight distance at the entrance to RHP as the justification for the Round Hills Access Project – yet this same project fails to provide the same condition of safety for the residents and visitors of Sierra Sunset Lane, a street within RHP. In fact, the FHWA project actually *reduces* the safety of the intersection of Sierra Sunset Lane and US 50. To add insult to injury, there is no planned left-turn nor accel lane at the Sierra Sunset Lane/US 50 intersection, and FHWA is planning such a lane at the entrance to RHP. FHWA is providing neither adequate sight distance lines nor a simple short left turn lane for Sierra Sunset Lane.

STATEMENT OF OPINION

- When, in the future, there is a collision at the intersection of Sierra Sunset Lane and US 50, the responsibility will fall squarely on the Nevada Department of Transportation (NDOT).

If additional information becomes available at a later time, this Engineer reserves the right to supplement this Report.

James C. Jeffery III, P.E., PTOE

Date

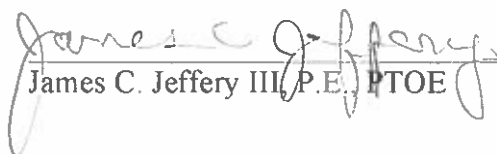
SUMMARY OF FINDINGS/CONCLUSIONS

- FHWA has cited the need to remedy inadequate sight distance at the entrance to RHP as the justification for the Round Hills Access Project – yet this same project fails to provide the same condition of safety for the residents and visitors of Sierra Sunset Lane, a street within RHP. In fact, the FHWA project actually *reduces* the safety of the intersection of Sierra Sunset Lane and US 50. To add insult to injury, there is no planned left-turn nor accel lane at the Sierra Sunset Lane/US 50 intersection, and FHWA is planning such a lane at the entrance to RHP. FHWA is providing neither adequate sight distance lines nor a simple short left turn lane for Sierra Sunset Lane.

STATEMENT OF OPINION

- When, in the future, there is a collision at the intersection of Sierra Sunset Lane and US 50, the responsibility will fall squarely on the Nevada Department of Transportation (NDOT).

If additional information becomes available at a later time, this Engineer reserves the right to supplement this Report.


James C. Jeffery III, P.E., PTOE


Date

EXHIBIT

A

EXHIBIT

A

JAMES C. JEFFERY III, P.E., P.T.O.E.
Traffic and Civil Engineering Consulting Services
CURRICULUM VITAE ATTACHMENT

Detailed Description of Experience and Expertise

Roadway Design Defect and Design Immunity

Collision Site Investigation

All Jurisdictions

All Types of Vehicles Pedestrians Bicyclists

All Land Use Types

All Roadway Types

Freeways and Highways Urban and Suburban Streets

Rural Roadways Intersections Private Roadways, Driveways

Special Sites

Guard Rails, Poles, Medians

Parking Lots (Speed Bumps, Wheel Stops & Pedestrian Access)

Rail Lines Mass Transit

Roadway Design, Construction & Maintenance Evaluation

Sight Distance Evaluation

Dangerous Condition of Public Roadway

Roadway Construction Defects

Signing and Striping Defects

Standard of Care Compliance

Change of Condition Determination

Pavement Condition Rating/Defects

Maintenance Standards & Practices

Construction Zone Accident Investigation

Work Zone Traffic Safety

Traffic Control Plans

Inspection Practices

Contract Compliance

Accident Hazard Review

Roadway Safety Audits

Accident Mitigation Measures

Identifying Conditions Causal to Accidents

Accident Frequency Review for Notice

Risk Assessment/Exposure

Traffic Signal Timing, Design and Maintenance

Designed and reviewed traffic signal plans and lighting studies

JAMES C. JEFFERY III, P. E., P.T.O.E.
Traffic and Civil Engineering Consulting Services
CURRICULUM VITAE ATTACHMENT

Detailed Description of Experience and Expertise

Traffic Engineering

Highway Design

Designed streets and highways, including signing and striping
Provided peer review of geometric design of streets and highways
Performed preliminary roadway engineering, including analysis of alternatives
with accompanying cost estimates
Conducted sight distance investigations
Determined the best solutions for traffic access to subject site; recommended
modifications to access solutions proposed or provided by public agencies
Determined appropriate traffic control devices, including speed humps
Designed traffic control plans for construction zones

Plan Line Studies

Reviewed survey information and existing improvements
Prepared plan lines showing the ultimate right-of-way, curb, gutter and sidewalk,
utility easements, medians and roadway cross sections; cost estimates included

Traffic Signal Design and Traffic Systems

Designed and redesigned traffic signal installations
Optimized traffic signals using SOAP, Passer II, TRANSYT 7 and other
computer programs
Determined potential regional air quality produced by optimizing region's
signalized intersections

Transportation Engineering Studies

Recommended neighborhood traffic control measures in order to mitigate adverse
thru traffic in a residential area
Created School Area Pedestrian Safety Policy
Conducted counter programs, license plate surveys, road condition surveys and parking surveys

JAMES C. JEFFERY III, P.E., P.T.O.E.
Traffic and Civil Engineering Consulting Services
CURRICULUM VITAE ATTACHMENT

Detailed Description of Experience and Expertise

Transportation Planning
Rural, Small Urban & Metropolitan Areas

Traffic Impact Analyses

Level Of Service (LOS) calculations
Site planning, parking, access, circulation studies
Traffic impact fee nexus
Mitigation measures recommended include on and off-site roadway traffic control devices, roadway and parking lot re-design, signing and striping, signal modification, neighborhood traffic control

Traffic Data Studies

Vehicle count and classification, speed survey, traffic delay, signal pre-emption and traffic signal warrant studies, license plate and origin/destination surveys
Highway Program Monitoring System Inventory including pavement condition

Traffic Data Analysis Reports

Traffic safety, on/off street parking analysis, trip generation rate
Mixed use traffic and parking reduction
Pedestrian flow in non-commercial expressive activity

General Plan Circulation Element

Created comprehensive traffic demand and forecasting studies for the corridor and circulation element of a General Plan using several traffic demand models; prepared accompanying environmental impact analysis

School Site Circulation

Pedestrian safety policy and traffic circulation in school zones

Land Use

Eminent Domain
Prescriptive Easement
Roadway Easement
Public Representation
Public Records Research

EXHIBIT B

EXHIBIT B

Federal Rules of Civil Procedures 26 (a) (2) (B)
Case Listing by Deposition and/or At Trial, 2017-Present
 (does not include Declarations, Affidavits or Reports)

COURT CASE NAME	COURT	DATE	TESTIMONY
Nazeri v. Ames-Granite, et al.	Broomfield Co., CO	February, '17	Deposition
Burton v. City of Davis, et al.	Yolo Co., CA	March, '17	Deposition
Sandy v. Silva Construction	Jefferson Co., CO	April, '18	Deposition
Dragics v. Custom Lawn & Landscape Maintenance, Inc., et al.	Washoe Co., NV	August '18	Deposition
Pacheco v. New Mexico Dept. of Transportation, et al.	Bernalillo Co., NM	September '18	Deposition
Rostro v. Pettis	Orange Co., CA	October '18	Deposition
Lewis v. Gutierrez, et al.	Sacramento Co., CA	January, '19	Deposition
Lewis v. Gutierrez, et al.	Sacramento, Co., CA	January, '19	Trial
Lansman v. Cabrera	Ventura Co., CA	February '21	Deposition
Luyet-Haggerty v. Mariposa Landscape	Maricopa Co., AZ	March, '21	Deposition
Luyet-Haggerty v. Mariposa Landscape	Maricopa Co., AZ	June, '21	Trial
Foster v. State CA (Atkinson), et al.	San Bernardino Co., CA	October, '21	Deposition

James C. Jeffery III, P.E., PTOE
 P.O. Box 961 Los Gatos, CA 95031-0961
 408-377-6222
info@trafficandcivilengineer.com

EXHIBIT C

EXHIBIT C

U.S. Department of Transportation

Federal Highway Administration
Central Federal Lands Division

Finding of No Significant Impact

for

NV FLAP US 50(1),
Round Hill Pines Access Project
Douglas County, Nevada

This Finding of No Significant Impact is submitted pursuant to:

42 U.S.C. 4332 (2)(c) and 49 U.S.C. 303

The Federal Highway Administration, Central Federal Lands Highway Division has determined that this project will have no significant impact on the human or natural environment. Principal areas of public controversy have been addressed, and there are no major unresolved issues outstanding. This finding is based on the *US 50 Round Hill Pines Access Project Environmental Assessment* (Environmental Assessment); coordination with local and federal agencies; public involvement; and applicable laws, executive orders, and regulations. The Environmental Assessment, with revisions contained herein, accurately and adequately discusses the need, environmental issues, and impacts of the proposed Federal Highway Administration project and appropriate mitigation measures. It lists environmental commitments to be carried out by the FHWA in order to minimize unavoidable impacts. The Environmental Assessment provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. FHWA takes full responsibility for the accuracy, scope, and content of the following Environmental Assessment.

CURTIS R SCOTT

Digitally signed by CURTIS R SCOTT
Date: 2021.10.01 09:16:49 -06'00'

10-01-2021

Curtis Scott, P.E.
FHWA-CFLHD
Chief of Engineering

Date

Introduction

This Finding of No Significant Impact (FONSI) concerns the relocation of the Round Hill Pines Resort access road and U.S. Highway 50 (US 50) intersection, construction of a new access road to the Round Hill Pines Resort, and improvements to a 0.35-mile segment of US 50 near Zephyr Cove, Nevada (Figure 1).

The project includes the relocation of the Round Hill Pines Resort access road and US 50 intersection approximately 0.2 mile further to the north from the existing location. U.S. Highway 50 would be widened at the relocated intersection to accommodate a new northbound median left turn bay and northbound US 50 acceleration lane. The median left turn bay would accommodate travelers who are headed northbound along US 50 and are turning across traffic to enter the Round Hill Pines Resort. U.S. Highway 50 within the project area would receive a pavement mill and overlay, lane striping, pavement markings and a safety edge in addition to the relocated intersection widening. The Round Hill Pines Resort access road would be constructed on new alignment. The access road would be approximately 0.14-mile-long and reconstructed to accommodate two 12-foot lanes with 2-foot wide shoulders.

This FONSI has been prepared in cooperation with the U.S. Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA). The FONSI incorporates the *US Highway 50 Round Hill Pines Access Project Environmental Assessment* (Environmental Assessment), which was signed by FHWA-CFLHD on May 28, 2021. The Environmental Assessment analyzed the impacts of a no action alternative and one action alternative. The Environmental Assessment was made available to the general public and agencies for review and comment.

Purpose and Need

The purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from US 50 in Douglas County near Zephyr Cove, Nevada. The project is needed because the current US 50 entrance configuration into the Round Hill Pines Resort has safety concerns due to the limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50 for vehicles accessing the resort. In addition to the current configuration, the Round Hill Pines Resort access road contains a narrow roadway width, steep grades, and sharp curves. This configuration limits the flow for two-way traffic. The specific needs driving the project are discussed in further detail below.

- The existing Round Hill Pines Resort access road is located just north of the crest of a vertical curve along US 50, which results in limited sight distance to the south for travelers turning onto US 50. Sight distance for passenger vehicles south of the existing access road is below the recommended AASHTO sight distance values. This substandard sight distance measurement presents a safety hazard for vehicles exiting the Round Hill Pines Resort and turning north onto US 50, as well as northbound US 50 traffic.
- During the peak season, northbound US 50 experiences vehicle queuing and congestion in the inside lane. This is caused by Resort visitors making unprotected turning movements across southbound US 50 onto the access road.
- The existing access road is narrow with sharp turns and a steep grade, which limits two-way traffic and access for larger vehicles such as recreation vehicles, transit, and trailers.

Right-of-Way

The Round Hill Pines Access Project is located within lands owned and managed by the LTBMU and NDOT. The NDOT will amend the right-of-way easement deed to accommodate temporary construction impacts and permanent improvements located outside of the existing NDOT right-of-way easement deed. This decision, and the impacts associated with it, are included in the Environmental Assessment.

Selected Alternative

The Environmental Assessment analyzed a No Action Alternative and Action Alternative (Proposed Project Alternative). The Proposed Project Alternative was chosen as it was determined to meet the purpose and need of the project and would have no significant impact on the human or natural environment.

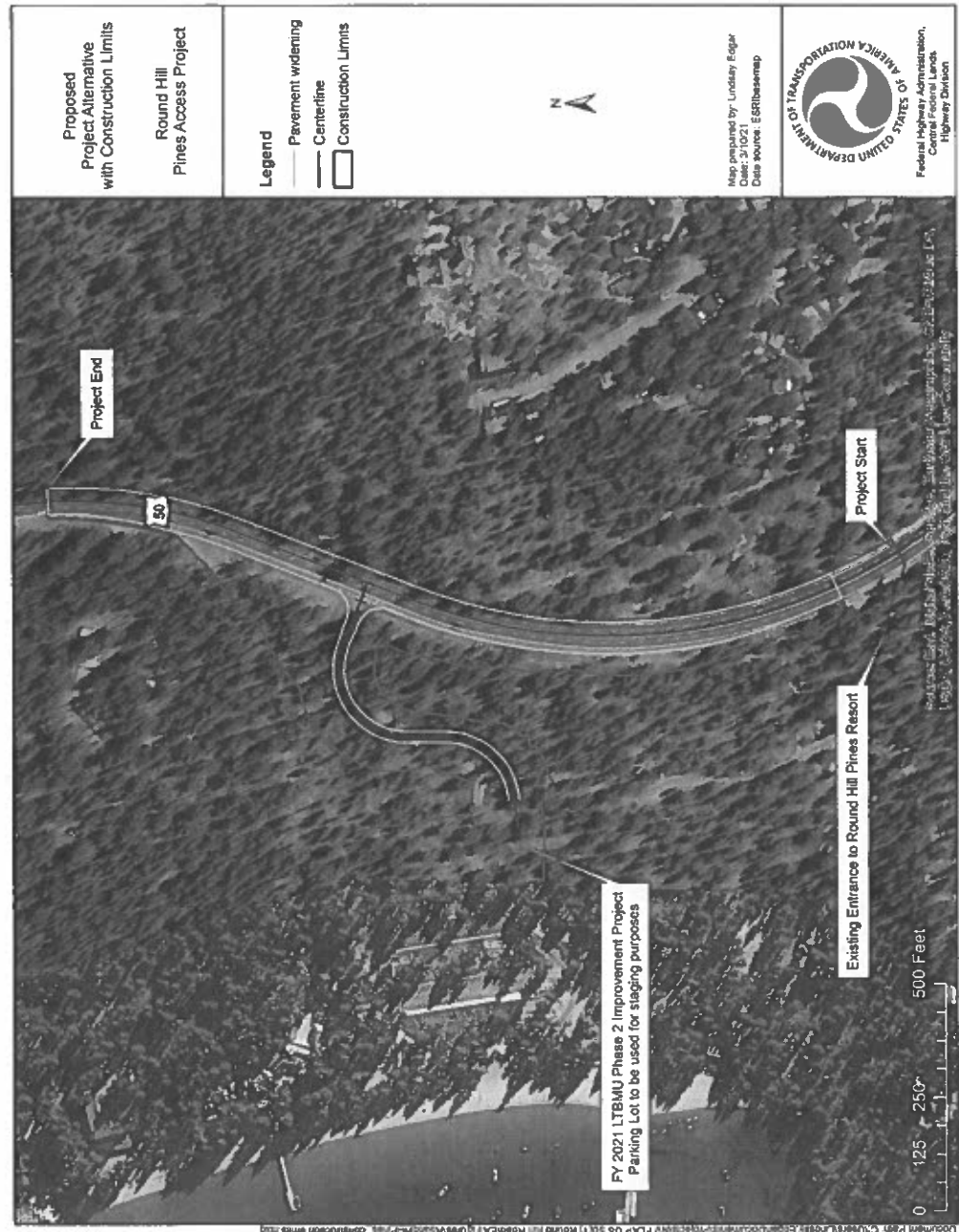
Changes Since the Release of the Environmental Assessment

The following changes and/or revisions have occurred since the release of the Environmental Assessment on May 28, 2021.

- *Cultural Resources.* The Environmental Assessment stated that the “*Architectural History Report for Round Hill Pines Access Road Improvement Project*” (Report) identified no historic sites listed or eligible for listing on the National Register of Historic Places (NRHP) located within the APE. Based on discussions with the Nevada State Historic Preservation Office (SHPO) on June 9, 2021, it was determined that the Round Hill Pines Resort Gate and Stone Wall is a contributing element to the NRHP-eligible Round Hill Pines Resort. After discussion with the project partners (LTBMU, NDOT, and TRPA), it was determined that the stone entrance wall would remain in place and would not be removed as part of the Round Hill Pines Access Project. Several safety measures will be implemented to minimize the appearance of the existing access road to Round Hill Pines Resort visitors. These safety measures will consist of: reducing the existing access road pavement approach section, removing the existing LTBMU signs from the stone entrance wall, keeping the existing access gate consistently closed and locked, adding temporary and permanent signage to direct travelers to the new access point, and adding vegetation to discourage parking adjacent to the stone entrance wall. The Report was revised to accurately reflect the eligibility determination of the Round Hill Pines Resort Gate and Stone Wall to eligible for listing in the NRHP.
- *Transportation.* The Environmental Assessment evaluated the effect of the Proposed Project Alternative on traffic and safety within the project area. Based on comments received during the public comment period, additional analysis was conducted to determine any effect the Proposed Project Alternative may have on Sierra Sunset Lane. The additional analysis is documented in the *NV FLAP US 50(1) Round Hill Pines Access – Sierra Sunset Lane Safety Analysis Memo*, see Appendix B. The Safety Analysis Memo concluded that the Proposed Project Alternative would not have a significant effect on Sierra Sunset Lane and the conclusions in the Environmental Assessment transportation section, including that the project would not cause a substantial adverse effect upon the existing transportation system, alter existing traffic patterns, or increase traffic hazards, remain valid.
- *Section 4(f).* Table 4.1-1 Potential Section 4(f) Resources Located within the Project Area in the Environmental Assessment identified that the Round Hill Pines Resort was protected under

Section 4(f) as a recreational resource. After coordinating with Nevada SHPO, the Round Hill Pines Resort is also considered protected under Section 4(f) as both a recreational and historic resource. The Round Hill Pines Resort Gate and Stone Wall are contributing elements to the NRHP-eligible Round Hill Pines Resort which is located within the project area, therefore FHWA-CFLHD must also consider the resources under Section 4(f) of the U.S. Department of Transportation Act. As defined in FHWA's implementing regulations (23 CFR 774), "for historic sites, de minimis impact means that the FHWA has determined, in accordance with 36 CFR part 800, that no historic property is affected by the project or that the project will have "no adverse effect" on the historic property in question." FHWA-CFLHD notified SHPO that it intends on using the SHPO's concurrence in the no adverse effect finding to make de minimis impact findings for the Round Hill Pines Resort Gate, Stone wall and the Round Hill Pines Resort. Douglas County is the Official with Jurisdiction over the Stateline-to-Stateline bike trail and LTBMU is the OWJ over the Round Hill Pines Resort. Both agencies concurred in writing on September 9, 2021 that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, see Appendix D.

Figure 1. Action Alternative



Consultation and Coordination

Provided below is a summary of the activity and comments that occurred during and after the public comment period.

The Notice of Availability for public review of the Environmental Assessment was posted on the FHWA-CFLHD project website on May 28, 2021. Electronic versions of the EA were available on the same website. Project partner, TRPA, had links to the FHWA website on their websites, also posted by May 28, 2021.

Newspaper ads ran as follows:

- Tahoe Daily Tribune, May 28, 2021
- Reno Gazette, May 28, 2021

The comment period was for 30 days from May 28 to June 27, 2021. The email list included federal, state and local government agencies, tribes, local businesses, landowners, outdoor/recreational/environmental organizations, and other interested parties. The list was developed in conjunction with LTBMU, NDOT, and TRPA.

Due to continuing COVID-19 pandemic restrictions, hard copies of the EA were not provided in nearby communities for review; however, it was announced in the Notice of Availability that any interested party could contact FHWA-CFLHD and request a hard copy or CD of the document. FHWA-CFLHD received one request for a hard copy of the document.

All comments were received by FHWA-CFLHD via email. No letters were received by the U.S. Postal Service. A total of 6 emails were received and are included in **Appendix C**.

While comments varied, both in support or opposition to the project, a few common areas of concern emerged and are shown in **Table 1**.

Table 1: Comments and Responses on the Round Hill Pines Access Environmental Assessment

Comment	Response
Prohibit parking along US 50 for visitors to Zephyr Cove Beach.	The Zephyr Cove Resort and beach area is located outside of the project area. Within the project area at the Round Hill Pines Resort, "No Parking" signs will be placed at the existing access road intersection. The approach pavement section will be reduced, and native species vegetation will be planted to also deter visitors from parking at this location.
Dangerous US 50 entrance/exit for residents at Zephyr Heights.	The Zephyr Heights neighborhood is located outside of the project area.
New access road intersection does not have adequate sight distance.	<u>Purpose and Need:</u> As mentioned in the EA, the existing Round Hill Pines Resort access road is located at the crest of a vertical curve along US 50, which results in substandard sight distance for passenger vehicles. The location of the new access road intersection was based on providing safer

Table 1: Comments and Responses on the Round Hill Pines Access Environmental Assessment

Comment	Response
	sight distance conditions. Visitors exiting Round Hill Pines Resort and turning left (north) and right (south) onto US 50 will have improved sight distance compared to the existing conditions. <i>(Please refer to Section 1.6 on Purpose and Need for Proposed Project in the EA.)</i>
Disagree with Section 3.9 Transportation conclusion that “[t]he project would not cause a substantial adverse effect upon the existing transportation system or alter existing traffic patterns or increase traffic hazards.” What are the impacts to Sierra Sunset Lane as a result of the access road relocation?	Additional analysis was conducted to determine any effect the Proposed Project Alternative may have on Sierra Sunset Lane. The additional analysis is documented in the <i>NV FLAP US 50(1) Round Hill Pines Access – Sierra Sunset Lane Safety Analysis Memo</i> , see Appendix B.
Will the proposed new Round Hill Pines entrance make it difficult for emergency service providers to access the properties located on Sierra Sunset Lane as traffic stacks up along US 50, blocking access to the Sierra Sunset Lane entrance?	Additional analysis was conducted to determine any effect the Proposed Project Alternative may have on the Sierra Sunset Lane intersection with US 50. The additional analysis is documented in the <i>NV FLAP US 50(1) Round Hill Pines Access – Sierra Sunset Lane Safety Analysis Memo</i> , see Appendix B.
How will the proposed new Round Hill Pines entrance affect those turning left/northbound onto US 50 from Sierra Sunset Lane?	Additional analysis was conducted to determine if the Proposed Project Alternative would impact those turning left/northbound onto US 50 from Sierra Sunset Lane. The additional analysis is documented in the <i>NV FLAP US 50(1) Round Hill Pines Access – Sierra Sunset Lane Safety Analysis Memo</i> , see Appendix B.
Perform a traffic study that includes the impacts of the proposed new Round Hill Pines entrance on the Sierra Sunset Lane Intersection.	Additional analysis was conducted to determine if a traffic study may be warranted at the Sierra Sunset Lane intersection due to the Proposed Project Alternative. The additional analysis is documented in the <i>NV FLAP US 50(1) Round Hill Pines Access – Sierra Sunset Lane Safety Analysis Memo</i> , see Appendix B.
In Section 3.10 Noise, the measurements were not taken from locations of the proposed improvements and receptors were not placed near the private residential properties.	<u>Noise:</u> Noise measurements were taken at 4 locations within the project area to determine the baseline ambient noise levels, see Table 4 in the Traffic Noise Study located in Appendix A of the EA. The baseline ambient noise levels were used to validate the Traffic Noise Model (TNM) that was created for the Round Hill Pines Resort and surrounding areas to show anticipated noise levels with the Proposed Project Alternative. Figure 3.10-1 Receptor Noise Locations in the EA show that noise measurements were taken at 4 locations within the project area. M3 and M4 were taken adjacent to private property located on Sierra Sunset Lane. The methodology employed for this analysis is consistent with both

Table 1: Comments and Responses on the Round Hill Pines Access Environmental Assessment

Comment	Response
	FHWA and NDOT guidelines for analyzing traffic noise. FHWA's approved TNM 2.5 was used for the noise analysis. Long term noise impacts were analyzed and are shown in Table 3.10-2 Modeled Noise Levels in the EA. Based on the TNM, there are no impacts at any of the noise-sensitive receivers. The noise levels are below the community noise equivalent level (CNEL) limit of 65 dB for this plan area; therefore, this Proposed Project is consistent with the TRPA CNEL standard. <i>(Please refer to Section 3.10 on Noise in the EA and the Traffic Noise Study in Appendix A of the EA.)</i>
Concerns over clean-up and trash collection at the Round Hill Pines Resort.	A third-party concessionaire is responsible for daily operations and maintenance of the Round Hill Pines Resort through a special use permit issued by the LTBMU. The LTBMU is not aware of any outstanding litter issues at the Round Hill Pines Resort, but neighbors are encouraged to reach out to the LTBMU office with concerns.

Additional Agency Coordination

The Nevada SHPO concurred with FHWA's determination of "No Adverse Effect to Historic Properties" on September 9, 2021. The concurrence letter, dated September 9, 2021, is included in **Appendix D**.

Resource Protection Measures

The environmental commitments that will be implemented to minimize the impacts of the project are included in **Appendix E**.

Appendices

Appendix A – Round Hill Pines Access Project – Environmental Assessment with Appendices

Appendix B: NV FLAP US 50(1) Round Hill Pines Access Sierra Sunset Lane Memorandum

Appendix C: Public Notice Comments on the Environmental Assessment

Appendix D: Section 106 and Section 4(f) Concurrence Letters

Appendix E: Environmental Commitments

Appendix A

Round Hill Pines Access Project – Environmental Assessment with Appendices

Joint Environmental Assessment

US Highway 50 Round Hill Pines Access Project

Lake Tahoe Basin Management Unit
NV FLAP US 50(1)
Zephyr Cove, Nevada



Prepared By:



U.S. Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division
Lakewood, Colorado

May 28, 2021

Round Hill Pines Access Project

NV FLAP US 50(1)
Zephyr Cove, Nevada

JOINT ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to:
42 U.S.C. 4332(2)(c) and 49 U.S.C. 303

U.S. Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division

In Cooperation with:
United States Forest Service, Lake Tahoe Basin Management Unit
Nevada Department of Transportation
Tahoe Regional Planning Agency

Additional information may be obtained from:

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CURTIS R SCOTT Digitally signed by CURTIS R SCOTT
Date: 2021.05.18 17:27:10 -0600'

Curtis Scott, P.E.
FHWA-CFLHD Chief of Engineering

05/18/2021

Date

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WHAT'S IN THIS DOCUMENT

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Department of Agriculture (USDA) Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), has prepared the Round Hill Pines Access Project Joint Environmental Assessment (EA), which examines the potential environmental impacts of the alternatives being considered for the proposed project located within the LTBMU near Zephyr Cove, Nevada in Douglas County. This document describes why the project is being proposed, alternatives considered for the project, the existing environment that could be affected by the project, and the proposed avoidance, minimization and/or mitigation measures.

What You Should Do

- In accordance with 23 CFR 771.119 this EA will be available for public review and comment for 30-days.
- Please read this document. The document and related technical studies are available for review at the FHWA website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>
- We welcome your comments. If you have any comments about the Proposed Project, please send your written comments to:

Ryan Mathis
Project Manager, FHWA-CFLHD

By postal mail at:
12300 W. Dakota Avenue, Suite 380
Lakewood, CO 80227

Or by email to:
ryan.mathis@dot.gov

Before including a personal address, phone number, e-mail address, or other personal identifying information in written comments, anyone providing written comment should be aware their entire comment – including their personal identifying information – may be made publicly available at any time. While anyone wishing to comment may ask FHWA in their comment to withhold their personal identifying information from public review, FHWA cannot guarantee it will be able to do so.

Send comments by the deadline: June 27, 2021.

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please contact Ryan Mathis using the contact information above.

What Happens Next

After comments are received from the public and reviewing agencies, CFLHD, in cooperation with LTBMU, NDOT, and TRPA, will respond to comments, prepare the final environmental decision document and may: (1) give environmental approval to the proposed project, (2) conduct additional environmental studies, or (3) abandon the project. If the project is given environmental approval, part, or all, of the project can be designed and constructed after all of the required permits or agreements are obtained.

Following public and agency review of the EA, CFLHD in coordination with LTBMU, NDOT, and TRPA will update the environmental analysis, if necessary, in response to comments received during the 30-day public review of the EA. Mitigation measures may be replaced with equal or more effective measures prior to project approval. If the impacts of the proposed project remain less than significant, then CFLHD will conclude the National Environmental Policy Act (NEPA) process with a Finding of No Significant Impact (FONSI). Because the environmental analyses and impact calculations contained in the EA are based on conceptual design, the impacts represent a worst-case scenario. Refinements undertaken through the design process are anticipated to lessen both the extent and severity of impacts presented in this EA.

A Federal agency may publish a notice in the Federal Register, pursuant to Title 23 United States Code (U.S.C.), Sec. 139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

ACRONYM LIST

AASHTO	American Association of State Highway and Transportation Officials
APE	Area of Potential Effect
ASTM	American Society for Testing and Materials
BA	biological assessment
BMP	best management practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFLHD	Central Federal Lands Highway Division
CFR	Code of Federal Regulations
CMP	corrugated metal pipe
CO	carbon monoxide
CWA	Clean Water Act
dBA	A-weighted decibels
DPS	distinct population segment
EA	environmental assessment
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FLAP	Federal Lands Access Program
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
GIS	Geographic Informational Systems
GPS	Global Positioning System
LTBMU	Lake Tahoe Basin Management Unit
MBTA	Migratory Bird Treaty Act
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NDOT	Nevada Department of Transportation
NEPA	National Environmental Policy Act
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
Pb	lead
PM	project mile
PM ₁₀	particulate matter less than 10 micrometers in diameter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
RCEM	Roadway Construction Emission Model
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way
SHPO	State Historic Preservation Office

IV

SO ₂	sulfur dioxide
SQIP	Scenic Quality Improvement Program
SWPPP	stormwater pollution prevention plan
TTD	Tahoe Transportation District
TRPA	Tahoe Regional Planning Agency
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Society

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APPENDICES

Appendix A: Technical Studies

- Round Hill Pines Access - Traffic Signal Warrant Study
- Round Hill Pines Access - Intersection Design
- Biological Assessment/Biological Evaluation for the NV FLAP US 50(1) Round Hill Pines Access Project
- Traffic Noise Study for the NV FLAP US 50(1) Round Hill Pines Access Project
- Visual Impact Assessment for the NV FLAP US 50(1) Round Hill Pines Access Project

Appendix B: Public Involvement Materials

April 2019 Public Information Meeting

- Newsletter
- Public Notice
- Comments

September 2019 Public Information Meeting

- Newsletter
- Public Notice
- Comments

CHAPTER 1: PURPOSE AND NEED

1.1 Introduction

The Federal Highway Administration Central Federal Lands Highway Division (FHWA-CFLHD), in cooperation with the United States Department of Agriculture (USDA) Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort (Resort) from U.S. Highway 50 (US 50). The Resort is located within the boundary of the Lake Tahoe Basin Management Unit National Forest and is operated by a third party business under a special use permit. The project begins south of the existing entrance into the Resort and extends north along US 50 for approximately 0.35-mile. The project is located in Douglas County near Zephyr Cove, Nevada (see Figure 1.1-1).

This Environmental Assessment (EA) has been developed to meet CFLHD's obligations as the lead agency under the National Environmental Policy Act (NEPA) of 1969, as amended. The analysis in this document concentrates on aspects of the project that could have a significant effect on the environment, and identifies feasible measures to mitigate (i.e., avoid, minimize or compensate) these impacts.

1.2 Lead Agencies

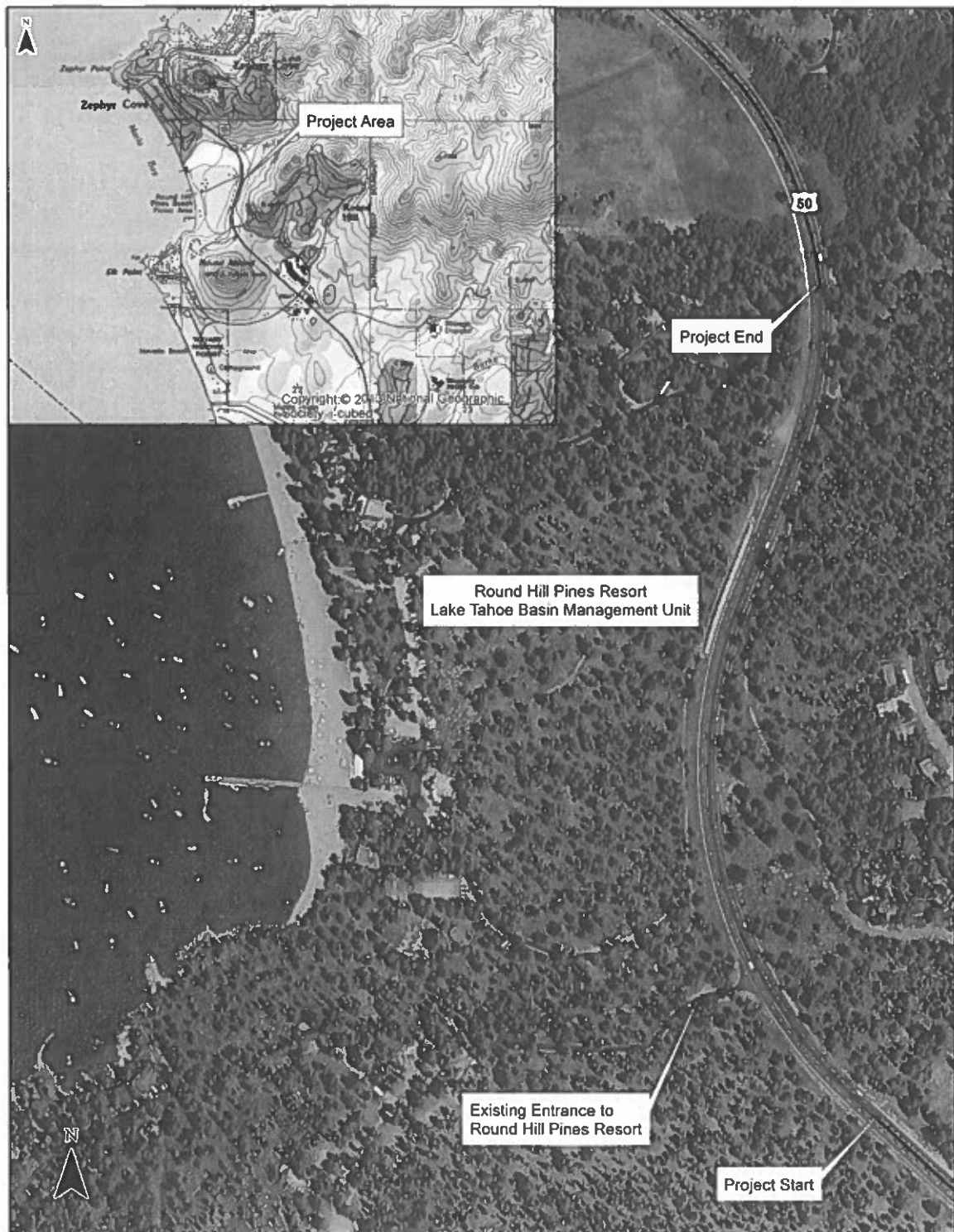
This EA has been prepared in accordance with both NEPA and TRPA environmental review requirements. For NEPA, the EA is written to comply with the statute, Council on Environmental Quality Regulations Implementing NEPA (Title 40, Section 1500 and subsequent sections of the Code of Federal Regulations (23 CFR 771) and related procedures. For TRPA requirements, the EA complies with Chapter 3 of the TRPA Code of Ordinances (Code) and Article VI of the TRPA Rules of Procedure. The lead agency for the NEPA aspect of the EA is FHWA, Central Federal Lands Highway Division. TRPA is the lead agency and primary permitting agency under the Tahoe Regional Planning Compact (Public Law 96-551).

1.3 Federal Lands Access Program

The proposed improvements are administered under the Federal Lands Access Program (FLAP), which provides funds for projects on "access transportation facilities." An access transportation facility is a public highway, road, bridge, trail, or transit system that is located on, is adjacent to, or provides access to federal lands for which title or maintenance responsibility is vested in a state, county, town, township, tribal, municipal, or local government. The FLAP supplements state and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

The proposed project was placed in the FLAP in 2017 with local funds from the LTBMU concessionaire at the Resort, NDOT, and TRPA. The estimated cost of construction is approximately \$6.9 million (FY 2020 dollars).

Figure 1.1-1: Project Location



1.4 Proposed Project

The Project proposes the Round Hill Pines Access Project to improve safety for visitors entering and exiting the Round Hill Pines Resort from US 50. The Project will improve access to federal lands in Douglas County, Nevada including the Lake Tahoe Basin Management Unit of the Tahoe Basin National Forest and recreational opportunities located at the Round Hill Pines Resort.

The Round Hill Pines Access Project (Project) would propose a new access road to Round Hill Pines Resort for vehicles, bicyclists and pedestrians. The new access road would be located approximately 0.2-mile north from the existing access road. The existing access road would remain in place; however, it would be closed to the public. The Project would also improve access to Round Hill Pines Resort for visitors traveling along US 50 with a median left turn and acceleration lane along northbound US 50. The Project would also include pavement resurfacing, lane striping and drainage improvements.

1.5 Project Location

The Project would be located along a 0.35-mile segment of US 50, near Zephyr Cove, Nevada in Douglas County. The Project would be constructed on NDOT right of way easements for work located along US 50 and on LTBMU land for the Round Hill Pines Resort access road.

US 50 is a major transcontinental highway that stretches over 3,000 miles, originating in Ocean City, Maryland and ending in Sacramento, California. US 50 was created in 1926 as part of the original United States Highway system. In Nevada, US 50 was built along the route of the Lincoln Highway which was the first transcontinental highway in the United States. The Lincoln Highway was one of many transportation corridors across Nevada in the nineteenth and early twentieth centuries to carry wagons, trains, and automobiles passing through small and large communities (Mead & Hunt, 2018).

In the vicinity of the Project, US 50 has a mountain corridor environment and traverses through forested, steep, and winding terrain with multiple access points to residential communities, commercial businesses, or public lands. The average daily traffic (ADT) along US 50 within the project corridor is 20,000 vehicles, with projected 2036 traffic volumes of 25,641 vehicles (NDOT, 2013). The average roadway width is 56 feet with two lanes of travel in each direction and variable width shoulders with a paved ditch. Posted speeds along US 50 within the Project is 45 miles per hour.

Round Hill Pines Resort Beach and Marina is located within the boundary of the Lake Tahoe Basin Management Unit National Forest and is operated by a third party business under a special use permit. The Round Hill Pines Resort contains day use areas such as a marina, beach, restaurant, and provides access to the Stateline to Stateline Bike Trail. Improvements to the facilities at the Round Hill Pines Resort have been completed recently. Additional planned improvements will consist of a proposed project to improve the traffic circulation and consolidate parking. (2017 Nevada FLAP application)



US 50 near Round Hill Pines Resort

1.6 Purpose and Need for Proposed Project

The purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from US 50 in Douglas County near Zephyr Cove, Nevada.

The project is needed because the current US 50 entrance configuration into the Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50 for vehicles accessing the resort. In addition to the current configuration, the Resort access road contains a narrow roadway width, steep grades, and sharp curves. This configuration limits the flow for two-way traffic containing transit and recreational vehicles. The specific needs driving the project are discussed in further detail below.

- The existing Resort access road is located at the crest of a vertical curve along US 50, which results in limited sight distance for both travel directions. Sight distance for passenger vehicles south of the existing Resort access road is below the recommended AASHTO sight distance values. This substandard sight distance measurement presents a safety hazard for vehicles exiting the Resort and turning north onto eastbound US 50, as well as eastbound US 50 traffic.
- During the peak season, eastbound US 50 experiences vehicle queuing and congestion in the inside lane. This is caused by Resort visitors making unprotected turning movements across westbound US 50 onto the access road.
- The existing access road is narrow with sharp turns and a steep grade, which limits two-way traffic and access for larger vehicles such as recreation vehicles, transit, and trailers.

Objectives for the project includes the following:

- Align the Round Hill Pines Beach and Resort functions with the LTBMU's long term vision for the area.
- Improve alternate transportation options into Round Hill Pines Resort such as bike, pedestrians, and transit.
- Minimize environmental and scenic quality impacts.
- Construct permanent water quality improvements to reduce sedimentation and runoff into the Lake Tahoe basin.

1.6.1 Safety

US 50 is a traditional mountain corridor that contains horizontal and vertical curvature with multiple access points to public land, private residences, and commercial/retail areas. The Resort area is a popular attraction that provides public beach access for local Lake Tahoe area residents, as well as tourists. The LTBMU estimates the annual visitation of the Resort to be approximately 155,000 people, with a higher monthly visitation period during the summer months. NDOT estimates the 2020 ADT along US 50 at 20,812 vehicles per day with 3% truck traffic. NDOT provided crash data along a segment of US 50 within a quarter mile of the Resort access road point. From July 2009 to July 2017, nine crashes were reported, six of them were rear-end collisions and three angle-type crash. Four of the nine crashes resulted in injuries, with the remainder causing property damage only. None of the reported crashes involved bicyclists or pedestrians. The overall crash rate for this segment of US 50 is higher than the statewide average (LSC Transportation Consultants, Inc., 2017).



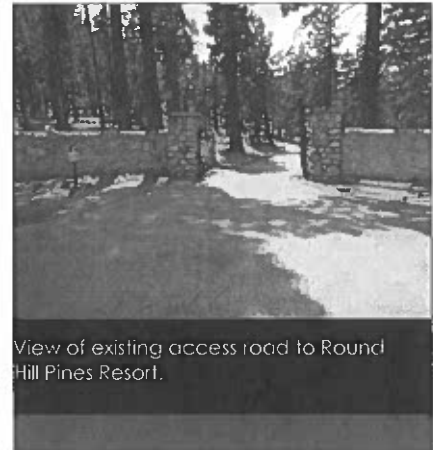
View looking south along US 50 from existing access road.

Based on the existing conditions, the location of the Resort access road is not sufficient to safely accommodate the volume of traffic entering into the recreation area. The increased visitation to the Resort, substandard sight distance, and lack of protected turning movement accommodations in northbound US 50 creates a safety hazard.

1.6.2 Accessibility

Existing pavement widths along the Resort access road varies between 12-feet and 18-feet wide, with a hairpin turn and steep grades leading down to the parking areas and beach access. The existing roadway has no shoulders or lane markings. These narrow conditions are inadequate to accommodate two-way traffic. The existing roadway does not provide sufficient width for opposing directional vehicles to safely pass each other. Larger vehicles, such as recreational vehicles, school buses, park shuttles, and delivery trucks, frequently encroach into the opposing travel lane due to the narrow width of the road. The 2016 ADT for the Resort access road is 1,200 which is based on proposed parking availability and concessionaire delivery vehicles. This scenario not only creates safety concerns, but also places stress on the pavement edges, requiring additional maintenance (CFLHD Pavement Tech Memo, 2019).

Drivers typically expect uniform or consistent roadway design, which can improve their ability to respond to situations on the roadway. The inconsistent widths along the project route present safety concerns because the roadway lacks the predictability users expect, particularly users who are not familiar with the roadway, such as tourists.



View of existing access road to Round Hill Pines Resort.

CHAPTER 2: ALTERNATIVES

This section describes the proposed action and the project alternatives that were developed pursuant to NEPA to meet the project purpose and need while avoiding or minimizing environmental impacts. The alternatives evaluated in this EA include the No Action Alternative and the Action Alternative.

2.1 Alternatives

A No Action Alternative and one Action Alternative (the Proposed Project) are analyzed in this EA. The National Environmental Policy Act requires agencies to analyze the consequences of taking no action, which is represented by the No Action Alternative. In addition, the No Action Alternative provides a baseline for comparing the consequences of the Action Alternative.

2.1.1 No Action Alternative

Under the No Action Alternative, the proposed activity would not take place.

- No actions to address safety concerns at the existing Resort access road and US 50 intersection. No changes will be made to address sight distance for visitors and the area.
- No actions to improve congestion and vehicle queuing in the northbound US 50 inside lane. Round Hill Pines Resort visitors will continue to make unprotected turning movements across US 50. Through traffic along US 50 will encounter vehicles stopped and waiting to enter the Resort.
- No actions to improve the access road other than routine maintenance activities. No changes would be made to widen the access road to accommodate two-way traffic, flatten curves, or other measures to increase accessibility for larger vehicles.

2.1.2 Action Alternative (Proposed Project)

Under the Action Alternative, a 0.35-mile segment of US 50 would be improved and the Round Hill Pines Resort access road and US 50 intersection would be relocated approximately 0.2 mile further to the north from the existing location. U.S. Highway 50 would be widened at the relocated intersection to accommodate a new northbound median left turn bay and northbound US 50 acceleration lane. The median left turn bay would accommodate travelers who are headed northbound along US 50 and are turning across traffic to enter the Round Hill Pines Resort. The US 50 cross section at the relocated intersection would consist of two 12-foot northbound lanes, two 12-foot southbound lanes, a 12-foot wide median left turn bay and a median northbound US 50 acceleration lane. Shoulder widths along US 50 would remain the same as existing and would consist of 4-foot along US 50 southbound and 6-foot along US 50 northbound. The US 50 alignment would not change as part of the Proposed Project. U.S. Highway 50 within the project area would receive a pavement mill and overlay, lane striping, pavement markings and a safety edge in addition to the relocated intersection widening.

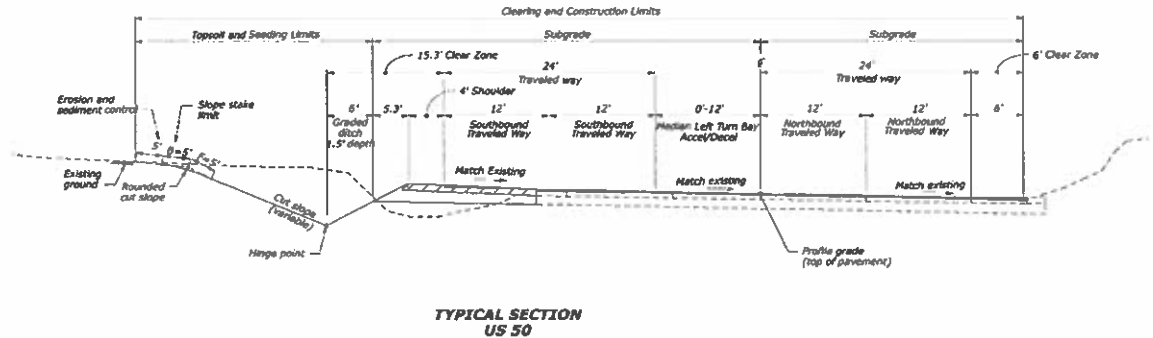
An existing concrete slab retaining wall is located along the west US 50 slope embankment facing into the Round Hill Pines Resort. The existing retaining wall would remain in place and the slope paving would be removed. Guardrail would be used at this location along with 1:2 slopes to minimize the construction footprint. A curb section with minimal ditching would be added along the west side of US 50 and no ditches would be constructed along the east side of US 50. Roadway slopes would be constructed using vegetation and/or rock to enhance visual aesthetics and blend into the natural setting.

Existing 18- and 36-inch culverts within the project area would be replaced as well as armored with riprap protection at the outlets. The clear zone, which is the area available for safe use by errant vehicles, would be improved through removal of obstructions, including clearing

vegetation adjacent to the roadway as feasible. All traffic control signs would be reviewed and replaced, if needed, to meet current standards.

Based on conceptual project design, a total of 0.6-acre of impervious surface would be added as a result of increased road surface. Because project design is still in preliminary stages, the area of disturbance and the amount of increased impervious surface anticipated represents a worst-case scenario. Refinements undertaken through the design process are anticipated to lessen the area of impact. Temporary and permanent water quality best management practices (BMPs) would be required as part of the proposed project and will be included in the final design.

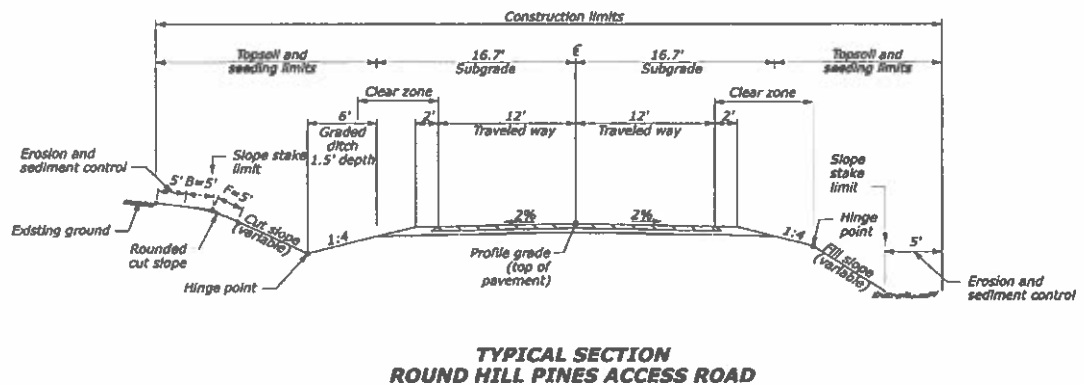
Figure 2.1-1: Proposed Typical Section for US Highway 50



Note: Typical section may vary in areas of localized improvements.

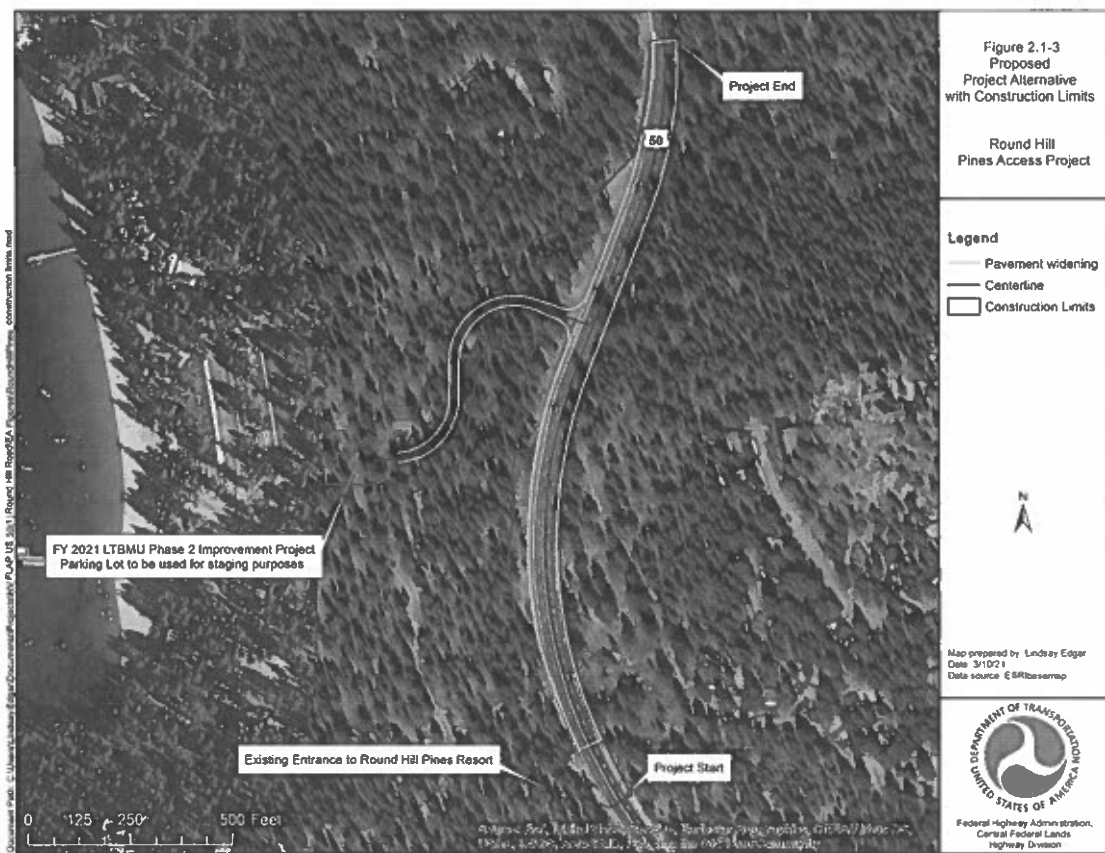
The Round Hill Pines access road would be constructed on new alignment. The access road would be approximately 0.14-mile-long and reconstructed to accommodate two 12-foot lanes with 2-foot wide shoulders. The new access road would have barnroof slopes consisting of 1:4 within the clear zone with 1:2 slopes to reduce construction impacts. The existing access road would remain in place for use by LTBMU and a local utility company. Public access to the old access road would be restricted by placing a gate with a lock across it and the size of the entrance would be reduced to discourage vehicles from turning into this location.

Figure 2.1-2: Proposed Typical Section for Round Hill Pines Access Road



Note: Typical section may vary in areas of localized improvements.

8



The LTBMU is planning to design and construct the Round Hill Pines Resort Phase II Improvement project which will enhance access to day use activities by consolidating the existing parking at the resort with a designated parking area, improving traffic flow within the resort by constructing a roundabout, and realigning a portion of the Nevada Beach pedestrian trail. The LTBMU is responsible for the design, environmental review, permitting, and construction of the Round Hill Pines Resort Phase II Improvement project. Construction is anticipated to be completed by the fall 2021. The relocated Round Hill Pines Resort access road would be constructed as part of the Proposed Project Alternative and would tie into the Round Hill Pines Resort Phase II Improvement project.

2.1.3 Construction

In general, construction activities for the Proposed Project would include excavation of material sources, placement of fill material soil stabilization, clearing and grubbing, grading, placement of crushed aggregate base and paved surface, revegetation, installation of guardrail and signs, drainage improvements, and other safety related features necessary to meet current design practice.

In general, construction activities would be located within the existing 80-foot wide US 50 right of way easement along US 50 and within the LTBMU Round Hill Pines Resort area. Modifications to the existing NDOT ROW easement deed would be needed to accommodate temporary construction impacts and permanent improvements outside of the existing NDOT easement, specifically along the west side of US 50. Existing utilities impacted by construction within the easement may need to be relocated but would remain within the boundary of the updated NDOT easement. Construction disturbances would be minimized to the extent possible to avoid environmentally sensitive areas.

2.1.3.1 Timing and Duration

Construction of the Proposed Project would begin in 2022 and occur over one construction season, weather permitting, to accommodate the grading season which begins May 1st and ends October 15th. Tree removal for the Proposed Project would occur in late fall 2021 to avoid any potential impacts to migratory birds. The trees will be cut near ground level and harvested by LTBMU. Any tree stumps will remain in place over the winter to provide soil stability. The LTBMU would construct the Round Hill Pines Resort Phase II Improvement project in 2021. US 50 would remain open during construction with potential delays associated with lane closures. If any delay longer than 30 minutes is anticipated to accomplish specific construction activities, then notice would be provided to USFS staff, the public, relevant local agencies, and emergency service providers. All construction would occur on weekdays during daylight hours. The existing access road to Round Hill Pines Resort would remain in place.

2.1.3.2 Utility Relocations and Installations

There are existing telecommunication, gas, and water utilities within the Proposed Project area. Project construction may require relocation of these utilities. FHWA-CFLHD would coordinate with utility providers during final design. It is anticipated that relocated utilities would be similar in type, appearance, width, and height to existing facilities, or as amended to conform to latest industry standards. Furthermore, new conduit may be constructed to service future fiber optic lines along the US 50 corridor (NDOT Future Fiber Optic Conduit, Senate Bill SP53).

2.1.3.3 Construction Staging

Construction, equipment staging, and stockpiling would take place in an existing paved parking lot area on the Round Hill Pines Resort. All equipment and materials would be stored, maintained, and refueled in designated portions of the staging areas in accordance with permit requirements. As such, there would be no staging in areas with sensitive environmental areas.

2.1.4 Preferred Alternative

The benefits and impacts of the No Action Alternative and Proposed Project Alternative, as further discussed in Chapter 3, were analyzed and considered in the identification of a preferred alternative. Based on this analysis and the ability of each alternative to meet the purpose and need of the project, CFLHD has identified the Proposed Project as the Preferred Alternative. This determination is subject to public review and final selection of a Preferred Alternative will occur following the public review and comment period.

After the 30-day public comment period, all comments will be considered. A final determination of the project's effects on the environment will be identified at that time. If it is determined the proposed action would not significantly impact the environment, a Finding of No Significant Impact (FONSI) will be issued in accordance with NEPA.

2.2 Alternatives Considered but Dismissed from Evaluation

The safety issues associated with limited sight distance for vehicles exiting the Resort onto US 50, congestion along eastbound US 50 during the peak season, and narrow roadway widths along the existing access road were identified in the FLAP application and through the project scoping process as issues the project needs to resolve. The proposed action as well as the purpose and need statement was presented to the public on April 23, 2019 at an open house meeting. Based on the information presented at the public meeting, the following alternatives or options were presented to the public on September 25, 2019 and considered during preliminary design but were dismissed either because they did not meet the project's purpose and need, were beyond the scope of the project, or had unacceptable impacts.

- Acceleration/Deceleration lanes with median left turn lane along US 50 and relocated Round Hill Pines Resort access road.** An alternative to construct an acceleration lane along westbound US 50, a deceleration lane along westbound US 50, a median left turn and eastbound US 50 acceleration lane was considered based on information received in the 2017 FLAP application and during project scoping meetings with NDOT, LTBMU, and TRPA (project partners). The alternative was developed to 30% design with plans, cost estimates and supporting information which were presented to the project partners and general public in September 2019. Concerns on the overall construction footprint were raised by the project partner agencies and two additional alternatives were developed based on their feedback and concerns. CFLHD performed a safety analysis on this alternative as well as the two additional alternatives (relocation of the Round Hill Pines Resort access road only and the Proposed Project). An Interactive Highway Safety Design Model (IHSDM) software analysis tool was used to evaluate the operation effects of geometric design decisions on highways. The IHSDM analysis showed this alternative results in the largest reduction in crashes due to the additional acceleration and deceleration lanes. Of the three alternatives evaluated in the safety analysis memo, this alternative results in the longest overall length of project (2,240 linear feet), the largest addition of 4.8 acres of impervious pavement, and a wider construction footprint (CFLHD Safety Analysis Memo, 2020). It was determined that in order to provide a project that is sensitive to the context of the US 50 mountain corridor throughout the Lake Tahoe Basin and to minimize environmental impacts, this alternative would not be evaluated further for consideration.
- Relocation of the Round Hill Pines Resort access road only.** An alternative to only relocate the Round Hill Pines Resort access road further to the north along US 50 was considered based on input and recommendations from the project partners at the conclusion of the September 2019 public meeting. This alternative would not have included additional safety improvements such as the median left turn lane and median acceleration lane. Moving the intersection to the north significantly improves sight distance from the existing conditions. The new access road would also provide a better experience for visitors to the Resort. Based

on the CFLHD Safety Analysis Memo, the IHSDM software shows a significant reduction in crashes when comparing the Proposed Project Alternative and only relocating the Round Hill Pines Resort access road intersection. This is supported by a 2017 publication by NDOT which shows, based on DOT state-wide reported crash data, the most common vehicle actions for fatal and serious injury crashes are going straight or turning left. Based on this safety analysis, this alternative was not recommended for further evaluations because it does not meet the purpose and need for the project by improving safety along US 50.

- **Roundabout Intersection at US 50 and relocated Round Hill Pines Resort access road.** An alternative to construct a roundabout at the US 50 and Resort access road intersection was considered based on feedback received from TRPA and the public during the open house meeting in April 2019. Based on preliminary design, US 50 would need to be realigned slightly to the west in order to avoid impacting private property located along the east side of the highway. The new US 50 alignment and roundabout intersection would result in fill material and impervious pavement located closer to the Lake Tahoe shoreline, which is a protected scenic resource. The Resort access road under the Roundabout Alternative would need to be constructed at an 11% grade, which exceeds design standards. This would create potentially unsafe conditions for commercial delivery trucks, recreation vehicles, trailers, and transit entering the Resort. The steep grade may also have increased stormwater runoff concerns that may affect water quality.

A two-lane roundabout intersection would introduce a new traffic pattern to this segment of US 50, as there are no other roundabouts along US 50 within the South Lake Tahoe community. The constructability of a roundabout intersection along US 50 was also a concern. Maintaining traffic operations along US 50 during construction of the roundabout within the grading season would have significant costs. Construction may require nighttime work and lane closures which would have impacts to adjacent landowners as well as increased environmental impacts to noise and wildlife. This alternative was not evaluated further due to constructability concerns, increased cost, and safety issues due to the 11% grade at the new Resort access road.

- **Signalized Intersection at US 50 and relocated Round Hill Pines Resort access road.** An alternative to add a signal to US 50 and Resort access road intersection was considered based on feedback from TRPA during the project scoping phase. Adding a traffic signal at the intersection and a left turn lane for northbound US 50 visitors entering the Resort would eliminate sight distance issues and provide protected turning movements for visitors entering the Resort along northbound US 50. CFLHD, with support from NDOT, performed a signal warrant analysis to support the decision making process. The analysis determined that the intersection would not qualify for a signal, see the CFLHD Signal Analysis Technical Memo in Appendix A for additional information. The Resort area is open seasonally from May to September and the signal would only be operational during this time. Introducing a seasonally operated traffic signal along US 50 may create unsafe conditions for drivers because the signal will only be operational while the Resort is open. Douglas County would be responsible for the operation and maintenance of the traffic signal. Currently, there is no utility infrastructure at the new Resort access road intersection to support a traffic signal. Introducing a new traffic signal along US 50 has the potential to increase traffic crashes, which creates a safety issue for travelers along US 50. Because this option did not meet the project's purpose and need for improving safety, it was not evaluated further.
- **Relocate Round Hill Pines Resort access road to the south.** An alternative to relocate the Resort access road south of the existing intersection was considered during the project scoping phase. This alternative would not improve access to the Resort because sight distance issues would still remain for vehicles due to the vertical curve in this location. Connecting the access road from a southern location with the recreation and parking areas at

the Resort would not align with LTBMU's long term plan and vision for the Round Hill Pines beach area. This alternative would also have increased impacts to private property and a larger construction footprint. Because the alternative would not improve safety for travelers along US 50 and would have increased impacts to private property owners, this alternative was determined to not meet the overall purpose of the project and was not evaluated further.

- **US 50 Lane Modifications.** Alternatives that would have provided shortened acceleration/deceleration lanes or only included constructing the median turn lane along US 50 were not considered during preliminary design. Acceleration/deceleration lanes shorter than the AASHTO or NDOT design standards would create unsafe driving conditions because drivers would expect to encounter full length lanes. Only constructing the median turn lane would not meet the project's purpose and need because improvements would not be made to the existing Resort access road.
- **Widen the existing Round Hill Pines Resort access road only.** An option to retain the existing Resort access configuration with US 50, but realign and widen the access road to meet 25 miles per hour design speed was considered during preliminary design. This option would not improve access to RHPR because substandard sight distance would still remain at the intersection with US 50. This alternative was determined not to meet the overall purpose of the project because the alternative would not improve safety.

2.3 Permits and Approvals Needed

Table 2.3-1 summarizes the permits and approvals required prior to construction.

Table 2.3-1: Permits and Approvals

Agency	Permit/Approval	Status
U.S. Forest Service	USDOT Highway Easement Deed for expansion or alteration of existing easement	Modifications to the existing easement deed would be needed to accommodate temporary construction impacts and permanent improvements outside of the existing Nevada DOT easement. A USDOT Highway Easement Deed application will be submitted following NEPA decision documents. Existing utilities impacted by construction within the easement may need to be relocated but will remain within the easement.
Tahoe Regional Planning Authority	Construction Permit	Permit will be obtained after signature of FONSI.
Nevada Department of Transportation	NDOT Encroachment Permit	Permit will be obtained prior to the start of construction.
Nevada Office of Historic Preservation	Section 106 consultation for potential effects to historic resources	The request for concurrence on eligibility and effect determinations will be transmitted to Nevada SHPO with a copy of the cultural resource report prepared for this project. Coordination with SHPO is ongoing and will be completed prior to issuance of a decision document.
Nevada Department of Environmental Protection	Construction General Permit/Stormwater Pollution Prevention Plan for discharge of stormwater related to construction activities National Pollutant Discharge Elimination System Permit for discharge of materials from a point source	Permits for water quality certification for the project will be submitted following NEPA.

CHAPTER 3: ENVIRONMENTAL CONSEQUENCES

This chapter describes the resources that could be affected by the Proposed Project Alternative and an analysis of the impacts that are expected to result from its construction and implementation. The No Action Alternative is also analyzed as a baseline for comparison.

The resource sections discussed below are prepared in accordance with the *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFT Section 1500 et seq.) issued by the CEQ. In addition, this EA follows the FHWA procedures for implementing NEPA, including *Environmental Impact and Related Procedures* (23 CFR Section 771), *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (T.6640.8a), and the *Environmental Guidebook*. As a joint EA, this document has also been prepared in accordance with the TRPA Tahoe Regional Planning Compact, Goals and Policies, Code, and Rules of Procedure. The TRPA Initial Environmental Checklist was used as a tool to guide the discussion of environmental effects.

The analyses that follow incorporate a conservative worst-case scenario based on conceptual design of the Proposed Project Alternative. The level of impact reported in this EA is expected to decrease as design progresses.

The project area and the study areas unique to each resource were defined in order to conduct the environmental impact analyses. For all resources, the project area consists of approximately 8.89 acres and is the construction limits of the Proposed Project Alternative, as described in Chapter 2. Proposed Project Alternative and Construction Limits. Because the nature and extent of an impact differs by resource, individual study areas were defined, as needed, to evaluate the existing condition and potential impact to each resource appropriately.

3.1 Organization of Resource Sections

Sections 3.3 through 3.12 of this EA are organized into the following subsections:

- **Regulatory Setting:** This subsection outlines any federal, state, and local regulations that are applicable to the designated resource.
- **Affected Environment:** This subsection describes the existing regional and local environmental conditions relevant to the resource under evaluation. The affected environment differs by resource area, and is determined by the potential for environmental effect. For example, air quality effects resulting from the Proposed Project Alternative are assessed in the context of the entire Lake Tahoe Basin, whereas cultural resource effects are assessed for the specific project area only.
- **Environmental Consequences and Recommended Mitigation Measures:** This subsection describes the criteria used to determine whether a significant adverse environmental effect could occur as a result of implementing the Proposed Project Alternative, the methods and assumptions used in the analysis, potentially adverse effects, and feasible mitigation measures that could reduce potentially adverse effects.

For all resources, direct effects are evaluated using the construction limits of the Proposed Project Alternative, as described in Chapter 2. The construction limits include all areas subject to construction disturbance, construction access, and staging areas. Indirect effects are generally evaluated for the entire project area and are defined as secondary consequences that are caused by the action and are often later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. The cumulative effects discussion considers the combined effects of the Proposed Project Alternative and the projects identified in Section 3.12, "Cumulative Impacts".

- **Consequences for TRPA Environmental Threshold Carrying Capacities:** For applicable resource sections, consequences for the relevant TRPA environmental threshold carrying capacities for water quality, soil conservation, air quality, vegetation, wildlife, fisheries, noise, recreation, and scenic resources are also discussed at the end of this section.

3.2 Resources with Negligible to No Impacts or Not Existing in the Project Area

The 1992 *Regulations for Implementing the Procedural Provisions of NEPA* direct federal agencies to “concentrate on the issues that are truly significant to the action in question” (40 Code of Federal Regulations [CFR] Part 1500.1(b)), “focus on significant environmental issues” (40 CFR Part 1502.1), and include “only brief discussion of other than significant issues” (40 CFR 1502.2(b)). Consideration and analysis was given to the resources listed below. These resources either do not occur in the project area or would have negligible or no impacts as a result of the project. The EA includes a summary statement describing why impacts to these resources will not be discussed further during the NEPA process.

3.2.1 Agricultural Resources

NEPA and the Farmland Protection Policy Act (FPPA, 7 United States Code [U.S.C.] 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with NRCS if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland; it can be forestland, pastureland, or cropland.

The Proposed Project is located entirely on land managed by the LTBMU and within the NDOT US 50 corridor and would not have any impact on agricultural resources.

3.2.2 Environmental Justice

FHWA projects must comply with Executive Order 12898 of February 11, 1994 titled *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. This executive order strives to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects on minority or low-income populations. The project is located entirely within NDOT right-of-way along US 50 and into the LTBMU Round Hill Pines Resort property. There are no residences within the project area. The actions proposed under this project are not expected to result in a disproportionately high adverse impact to any populations.

3.2.3 Floodplains

The Federal Emergency Management Agency (FEMA) establishes base flood heights for the 100-year flood zone. The 100-year flood zone is defined as the area that could be inundated by a flood that has a 1-percent probability of occurring in any given year, or once every 100 years. The project is located in an area that has been delineated on the FEMA Flood Insurance Rate Map (FIRM) as having areas in which flood hazards are undetermined, but possible. Impacts to floodplains typically occur when the topography within a floodplain is substantially modified either by placement or removal of materials within the floodplain. The Proposed Project would not substantially modify the floodplain topography therefore, no impacts to floodplains are anticipated.

3.2.4 Hazardous Waste and Materials

A search of the EPA EnviroMapper Database (2019) indicated the presence of four hazardous waste generating facilities reporting to the Environmental Protection Agency (EPA) within 1 mile of the project area. None of the facilities have a record of a significant violation or informal enforcement action related to hazardous materials within the last 5 years. Due to the search

results, it was determined there is a low potential for hazardous waste and materials within the project area and this topic was not further analyzed.

In accordance with TRPA Code of Regulations, due to the low potential for hazardous waste and materials within the project area, the project would not involve a risk of an explosion or the release of hazardous substances including, but not limited to, oil, pesticides, chemicals, or radiation in the event of an accident or upset conditions.

3.2.5 Land Use/Socioeconomics

The planning, design, and construction of roads is often based on land use development patterns and trends, and affects existing land uses and plans and proposals for future development. Induced growth is an indirect impact that occurs when a project causes changes in the intensity and integrity, location, or pattern of land use. The Proposed Project is located along a segment of US 50 that provides public access to the Round Hill Pines Resort, which is located within the LTBMU. Implementation of the Proposed Project would generally support the goals, objectives, and policies identified in the Linking Tahoe: Regional Transportation Plan – Tahoe Regional Planning Agency, Linking Tahoe: Lake Tahoe Basin Transit Master Plan, Linking Tahoe: Corridor Connection Plan, and Douglas County Transportation Plan.

The Lake Tahoe Basin Management Unit controls the land occupied by the Resort, which is operated by a third party under a special use permit. The terms of the special use permit require the third party operator to invest in the long term maintenance and operation of the facilities located on the Resort. The LTBMU, in cooperation with the third party operator, have identified parking and traffic flow improvements which will be completed prior to construction of the Proposed Project. No change to land use and no induced growth is expected.

Although Land Use was determined to have a negligible or no impact as a result of the proposed project, the TRPA Initial Environmental Checklist (IEC) requires some analysis, see Section 3.5 Earth Resources for a discussion on land use related to the TRPA IEC.

3.2.6 Paleontological Resources

Minimal excavation of undisturbed bedrock is anticipated because the majority of construction would be related to roadway widening and relocation of the Resort access road. A review of geological formations in this area revealed a very low propensity for fossils and other paleontological resources. If any such resource is encountered during construction, activities will cease and scientists will be brought to the site to investigate further and develop a course of action.

3.2.7 Right-of-Way

The Proposed Project is located within lands owned by the LTBMU and NDOT. The Proposed Project would require a modification of the existing NDOT Right of Way (ROW) easement deed. Modifications to the existing NDOT ROW easement deed would be needed to accommodate temporary construction impacts and permanent improvements outside of the existing Nevada DOT easement, specifically along the west side of US 50. Existing utilities impacted by construction within the easement may need to be relocated but would remain within the boundary of the updated NDOT easement.

3.2.8 Section 6(f) Properties

Section 6(f) of the Land and Water Conservation Act requires that the conversion of lands or facilities acquired with Land and Water Conservation Act funds be coordinated with the Department of Interior. Usually replacement in kind is required. No lands that meet this criterion were identified within the study area.

3.2.9 Utilities

Existing surface and subsurface utilities in the project area include active fiber-optic cables, water lines, telephone lines, and a natural gas line. Conflicts with existing utilities will be minimized in design to the extent practicable. Disruption of infrastructure and facility operations would be avoided in large part because the Proposed Project would not require extensive excavation activities. Coordination will continue with utility providers to ensure all conflicts are identified in design and any necessary utility relocations are scheduled to minimize potential service disruptions.

3.2.10 Wild and Scenic Rivers

No rivers officially designated as wild, scenic, or recreational exist within the project area.

3.3 Aesthetic and Visual Resources

This section describes impacts to visual and aesthetic resources expected from implementation of the No Action and Proposed Project Alternative. Visual or aesthetic resources are generally defined as the natural and built features of the landscape that can be seen. The features, or visual resources, contribute to the public's experience and appreciation of the environment.

3.3.1 Regulatory Setting

3.3.1.1 National Environmental Policy Act

NEPA establishes that the federal government use all practicable means to ensure for all Americans... aesthetically and culturally pleasing surroundings [U.S.C.] 4331[b][2]). The FHWA is required to promulgate guidelines to assure that final decisions on projects are to be made in the best overall public interest, taking into account adverse environmental impacts, including the destruction or disruption of aesthetic values (23 U.S.C. Sec. 109[h]).

3.3.1.2 Tahoe Regional Planning Agency

Based on TRPA's Initial Environmental Checklist, effects related to scenic resources were evaluated based on whether the Proposed Project Alternative would:

- Be visible from any state or federal highway, Pioneer Trail, or from Lake Tahoe;
- Be visible from any TRPA-listed public recreation area or TRPA-designated bicycle trail;
- Block or modify an existing view of Lake Tahoe or other scenic vista seen from a public road or other public area;
- Be inconsistent with the height and design standards required by the applicable ordinance or Community Plan; or
- Be inconsistent with the TRPA Scenic Quality Improvement Program (SQIP) or Design Review Guidelines.

TRPA has established environmental thresholds, goals, and policies for scenic resources in several categories: travel route ratings, scenic quality ratings, bike trail and public recreation area scenic quality ratings and community design. TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances for these resources were used to analyze potential effects from the Proposed Project Alternative on scenic resources.

3.3.2 Affected Environment

3.3.2.1 Location and Visual Context

The proposed Round Hill Pines Access project is located on the eastern side of Lake Tahoe in Douglas County, Nevada. The project includes a 0.35-mile section of US 50 which is a small segment of the Lake Tahoe East Shore Scenic Byway, a 28-mile long National Scenic Byway that traverses the eastern side of Lake Tahoe from Crystal Bay to Stateline, Nevada (Figure 3.3-1). The segment of US 50 located within the Project Area extends through an undeveloped, natural forested area that lies between the commercial and residential development at Zephyr Cove to the north and the shopping center at the intersection of US 50 and Elk Point Road to the south. Along this section of US 50, the landscape is heavily forested and views are restricted to the forested corridor along the highway with limited views of the lake or surrounding mountain ranges. Within the project area, metal guardrail and a concrete retaining wall can be observed along the west side of the highway corridor.

Wayfinding signage for the Round Hill Pines Beach and Marina can also be seen along US 50. The east side of US 50 contains rocky outcroppings with sparse shrub and other vegetation.

The project area is also located on LTBMU land within the Round Hill Pines Resort. This area is naturally forested and contains several buildings, mooring facilities, a restaurant and marina, parking areas, and swimming beach with views of Lake Tahoe and surrounding mountains.

3.3.2.2 Scenic Threshold Ratings within the Project Area

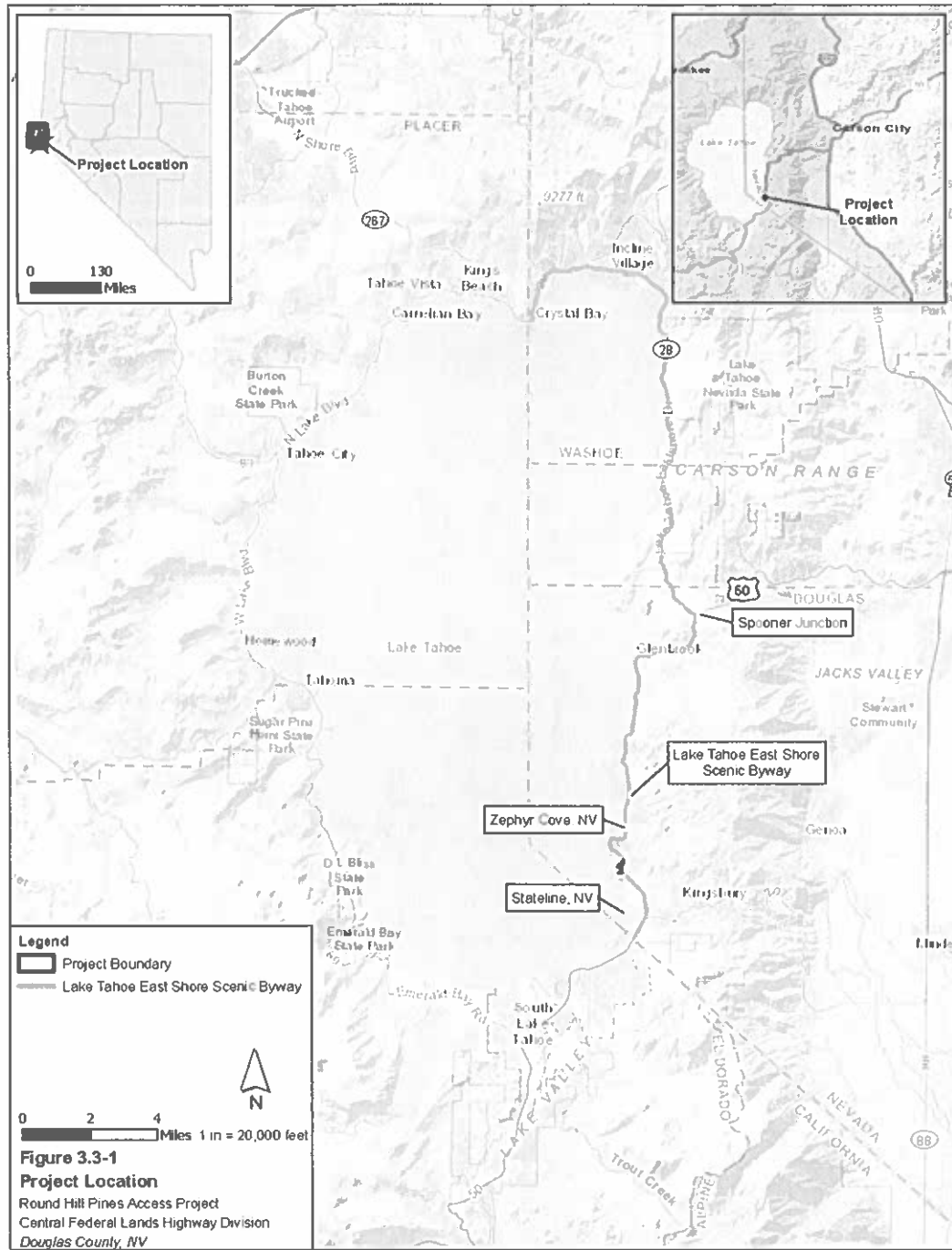
U.S. Forest Service Lake Tahoe Basin Management Unit

According to the Lake Tahoe Land Management Plan (USDA Forest Service, 2016) all lands under USFS jurisdiction are designated with a scenic integrity objective (SIO) that establishes the level of scenic quality that the plan seeks to achieve for each specific area. Within the project area, the plan has established an SIO of “High” a designation given to landscapes that appear unaltered. The “High” SIO designation refers to landscapes where the valued landscape character “appears” intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character and at such a scale that they are not evident (USDA Forest Service, 1995).

Tahoe Regional Planning Agency

TRPA established a baseline for evaluating the potential effects of proposed projects on views from Lake Tahoe and on views from roadways toward the surrounding environment, including Lake Tahoe. In 1982, TRPA published the scenic resource inventories that focused on shoreline views from the lake and views toward the lake from surrounding roadways (TRPA, 1982). In evaluating the views from the lake toward the shore, known as Shoreline Units, the inventory used a landscape scoring system that assigned numerical scores ranging from 1 (low visual quality) to 5 (high visual quality) to three variables (human-made features, background views, and landscape variety) that combined to create an overall visual quality score. In evaluating views from the roadway toward the lake, known as Roadway Units, scores from 1 to 5 were assigned to six variables (human-made features, roadway distraction, road structure, lake views, landscape views, and variety). (TRPA, 2016 Appendix G-1).

The project area is located within TRPA Shoreline Unit 29, Zephyr Cove which includes the Round Hill Pines Resort. The TRPA threshold composite score for Shoreline Unit 29 is 9 (TRPA 2016, Appendix G). The TRPA Shoreline Study (TRPA, 1982) characterizes the scenic quality of this unit as moderate and rates its level of scenic quality as 2. The project area is also located within TRPA Roadway Unit 30D, Zephyr Cove-Lincoln Park (subunit Round Hill). The TRPA threshold composite score for Roadway Unit 30D is 19. The TRPA Roadway Study (TRPA, 1982) characterizes the scenic quality of this unit as moderate and rates its level of scenic quality as 2.

Figure 3.3-1 – Project Location and Lake Tahoe East Shore Scenic Byway

3.3.3 Environmental Consequences and Mitigation Measures

Methods and Assumptions

A Visual Impact Assessment was prepared for the project by Jacobs in September 2020 and is attached in Appendix A. The objective of the analysis was to identify visual impacts from the Proposed Project Alternative and the consistency of those impacts with the Land Management Plan, Lake Tahoe Basin Management Unit scenic quality and TRPA Shoreline and Roadway threshold composite ratings. The area analyzed encompasses the 0.35-mile segment of US 50, approximately 500 feet southeast of the original entrance road and continues along US 50 to approximately 130 feet north of the intersection of Sierra Sunset Lane and US 50.

The analysis area extends out approximately 0.1 mile to the eastern side of the roadway, but encompasses the potential views of the Proposed Project Alternative from Lake Tahoe. It includes the Round Hill Pines Resort area and extends approximately 400 feet out into Lake Tahoe. For analysis purposes, the project area has been divided into two landscape units: the area along the 0.35-mile US 50 roadway segment and the area within the Round Hill Pines Resort, adjacent to the lake.

As a study tool for this EA, a set of simulations of the project have been prepared to demonstrate the appearance of the project at three key observation points (KOP). Within the US 50 roadway segment, key observation point 1 (KOP 1) is a view from a point in the northern portion of the project area looking south towards the proposed location of the new access road into the Round Hill Pines Resort. Key observation point 2 (KOP 2) is a view from the point in the middle section of the project area looking north towards the proposed location of the new access road into the Round Hill Pines Resort. Within the Round Hill Pines Resort and Lake Tahoe segment, key observation point 3 (KOP 3) is a view from a point located 300 feet out on the pier at the Round Hill Pines Resort looking towards the location of the new access road. Figure 3.3-2 includes a map depicting the location and direction of views for the three simulations. The existing views and KOP simulations are presented in Exhibits 3.3-1 through 3.3-6.

Because specific features of the Proposed Project Alternative, including landscaping and aesthetic treatments, have not been designed at this stage, the character of the project as shown in the simulations is conceptual, but provides a reasonable representation of its potential appearance. Details regarding form, materials, colors, and textures would be determined during final design. They would conform to the specifications and performance standards described in Mitigation Measure (MM) AES-1 through AES-2.

3.3.3.1 Visual Changes

No Action Alternative

Under the No Action Alternative, there would be no construction-related ground disturbance or modification to the existing US 50 and access road to the Round Hill Pines Resort that could result in visual changes due to the Proposed Project Alternative.

Proposed Project Alternative

A simulation of KOP 1 and KOP 2 as it would appear with the project in place is shown below in Exhibits 3.3-1 through 3.3-4. A review of both simulations shows that the project would have no visual effects on the existing eastern edge of US 50. The rip rap-covered cut slopes and the forest-covered slopes above them will be untouched by the project and therefore, will not be modified from the existing conditions. The US 50 modifications would be accomplished by extending the highway to the west. The result would be a highway that generally follows the existing highway alignment with a slightly wider footprint making it

appear less constricted. The US 50 roadway bench would be slightly extended into the forested area on the western side and would require tree removal in areas that are closest to the existing highway, however the solid line of trees along the western edge would mostly remain.

At the location of the new access road, a partial disruption to the tree line along the western edge would appear in this area. This disruption would not appear as a sharp gap in the tree line because the narrowness of the access road will limit the number of trees that would be removed. The new access road joins US 50 at a right angle would limit the visual effect of the break in the tree line that this road would create.

A steel guard rail would need to be constructed along the western edge of the widened US 50 for safety purposes, but unlike the existing unpainted galvanized guard rail along the western edge, the planned guard rail would have a brown surface treatment to help reduce its visual contrast with the highway corridor's natural setting (MM AES-1). Disturbed or exposed soils related to placement of fill along the western edge of the highway would be revegetated with native plants. With the Project, this segment of US 50 would continue to be an area where there are no views of the lake. The Project would create no changes in the views of the mountains to the south seen at the southern end of the project and would have no effect on the views toward the houses on the hill above the project's northern end. The Proposed Project Alternative is described in detail in Chapter 2.

Exhibits 3.3-5 and 3.3-6 show existing viewshed conditions at KOP 3 and a simulation of the view from the Round Hill Pines Resort pier looking eastward as it would appear with the Proposed Project Alternative in place. Because the area where the proposed project-related changes would take place is located upslope, over 1,000 feet in the distance, and because of the screening provided by the thick forest cover, the roadway improvements would not be visible from this vantage point. The only change to this view, which would be subtle, will be that because of the limited tree clearing that will be required for construction of the new access road, a few of the treetops now seen on the far horizon in the area above the rest room building will disappear. This change is reflected in the simulation. Overall, the effect of this change on the visual character and quality of this view will not be significant. The Proposed Project Alternative would cause no significant visual impacts.

Figure 3.3-2 – Landscape Units and Key Observation Points

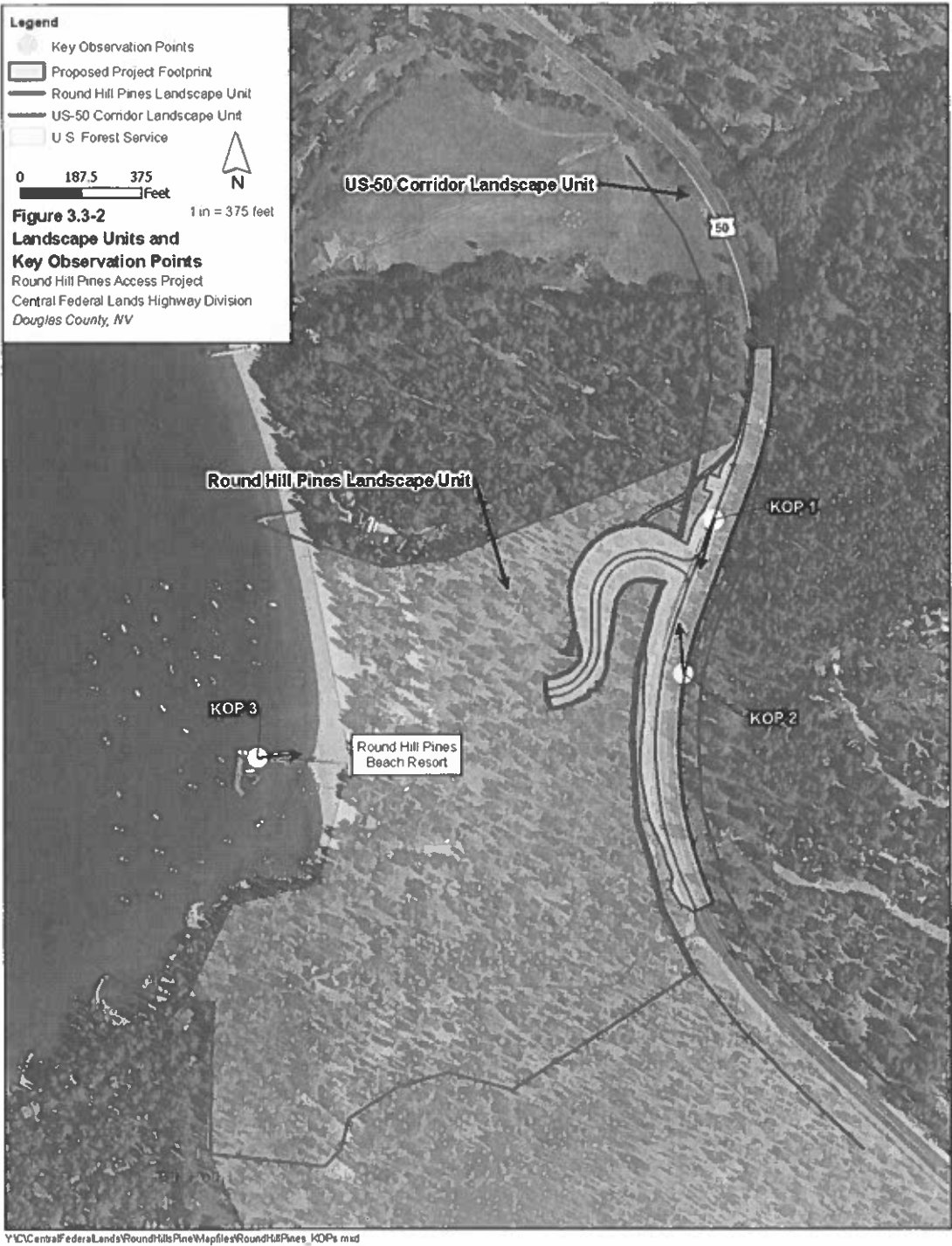


Exhibit 3.3-1 KOP-1. Existing view from US 50 looking South towards proposed access road location.



Exhibit 3.3-2 KOP-1. Simulated view from US 50 looking South showing proposed access road.



Source: Visual Impact Assessment, Jacobs 2020

Exhibit 3.3-3 KOP-2. Existing view from US 50 looking North towards proposed access road location.



Exhibit 3.3-4 KOP-2. Simulated view from US 50 looking North showing proposed access road.

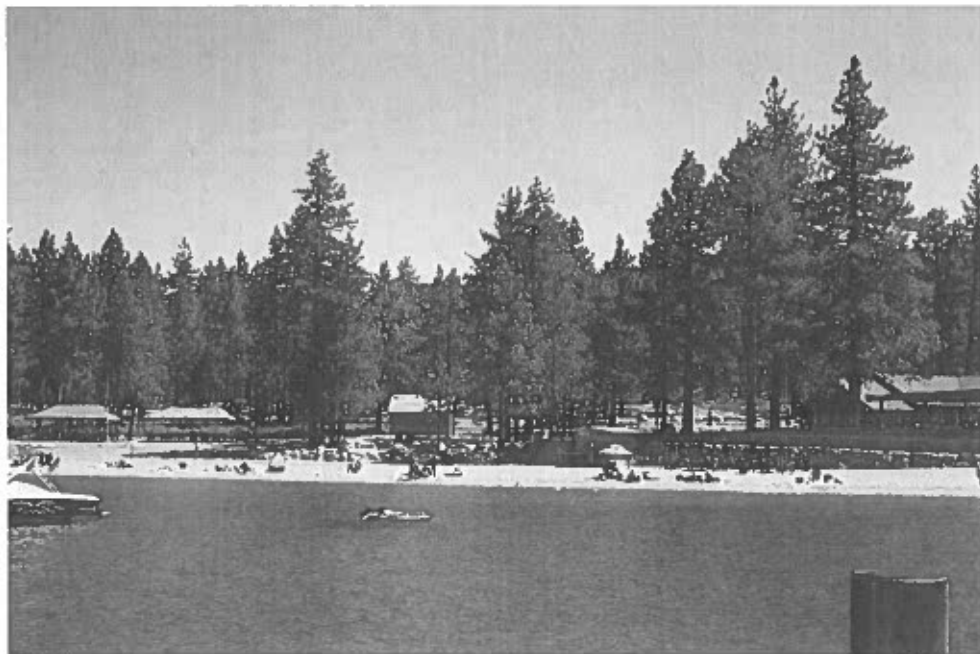


Source: Visual Impact Assessment, Jacobs 2020

Exhibit 3.3-5 KOP-3. Existing view from Round Hill Pines Resort pier looking East towards project.



Exhibit 3.3-6 KOP-3. Simulated view from Round Hill Pines Resort pier looking East towards project.



Source: Visual Impact Assessment, Jacobs 2020

3.3.3.2 Consistency with Design Standards, SQIP, and Design Review Guidelines

No Action Alternative

Under the No Action Alternative, there would be no construction-related disturbance or modification to the existing US 50 and access road to the Round Hill Pines Resort that could result in visual changes. Therefore, questions of consistency with design standards, the SQIP, or design review guidelines do not apply.

Proposed Project Alternative

The Round Hill Pines Access Project would comply with LTBMU, TRPA, and NDOT design standards. All features would be consistent with applicable design standards and design review guidelines. The SQIP was adopted to provide a program for implementing physical improvements to the built environment in the Lake Tahoe Basin. The SQIP was incorporated into and became a component of the EIP in 2001 (TRPA 2001 EIP in 2001 (TRPA 2001) The Proposed Project Alternative would be consistent with the SQIP's Goal #1 for roadway and shoreline travel units, which is to maintain and restore the scenic qualities of the natural appearing landscape. The SQIP is an overall action plan to specifically improve the scenic quality of roadway and shoreline travel routes that do not meet the scenic resources thresholds. It is intended to contribute to the attainment of the scenic quality thresholds. The limits of the Proposed Project Alternative are located within units that currently meet scenic resources thresholds.

3.3.3.3 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to aesthetic and visual resources. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure AES-1: Design applicable structures to be consistent with NDOT, TRPA, and LTBMU design standards and design review guidelines and compatible with existing architectural features in the Round Hill Pines Resort area.

Mitigation Measure AES-2: Design project features consisted with Chapter 66 of the TRPA Code.

3.3.4 Consequences for TRPA Environmental Threshold Carrying Capacities

This section describes the effects of the Proposed Project Alternative on TRPA environmental thresholds for scenic resources. Four scenic threshold reporting categories have been established by TRPA:

- Travel Route Ratings,
- Scenic Quality Ratings,
- Bike Trail and Public Recreation Area Scenic Quality Ratings, and
- Community Design.

As described in Section 3.3.2.2, the Round Hill Pines Access Project is located within TRPA Roadway Unit 30D, Zephyr Cove-Lincoln Park and Shoreline Unit 29, Zephyr Cove. Each of the travel units has a numeric scenic threshold rating. When the rating is equal to or above the applicable numeric scenic threshold standard, the unit meets or exceeds the standard, and is therefore in attainment. Otherwise the unit is below the standard and not in attainment.

Roadway Unit 30D has a scenic threshold composite score of 19 and is in attainment status (TRPA, 2016). The threshold composite score was based on evaluation using five variables, each of which was rated on a scale ranging from 1 (low) to 5 (high), see the Visual Impact Assessment

for Round Hill Pines Access Project located in Appendix A for additional details and discussion. The Proposed Project Alternative would not reduce the composite score for the roadway unit, and thus would not reduce the “moderate” rating that was assigned to the Zephyr Cove-Lincoln Park unit (of which the Unit 30D Round Hill is a sub-unit) in the Scenic Resource Inventory Tahoe Environmental Study Roadway Unit Inventory (TRPA 1982a).

The Shoreline Unit 29, Zephyr Cove has a scenic threshold composite score of 9 and this has been maintained in assessment taken from 1982 to 2015 (TRPA, 2016). This score was based on evaluation using three variables (human-made features, background views, and variety), each of which was rated on a scale ranging from 1 (low) to 5 (high). Because the Project visual changes on the view seen in the simulation and described in the text are negligible, they will have no effect on the individual scores on which the overall score of 9 was based. Because the threshold composite score for the shoreline unit in which the Project is located will not change, the Project will not reduce the “moderate” rating that the Scenic Resource Inventory Tahoe Environmental Study Shoreline Unit Inventory (TRPA 1982b) assigned to Shoreline Unit 29 Zephyr Cove.

3.4 Biological Resources: Aquatic Resources, Vegetation and Wildlife

This section evaluates potential impacts relating to biological resources in and around the project biological study area. This section includes an analysis of impacts to sensitive habitats, sensitive plants and wildlife and their associated habitats that may be impacted by the Proposed Project. The resources considered in this section were compiled through detailed review of available documentation of the project vicinity, outreach to regulatory agencies such as the USFWS, field observations, and professional expertise.

3.4.1 Regulatory Setting

3.4.1.1 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668–668c) prohibits the take of bald or golden eagles, including their parts, nests, or eggs. In terms of the act, “take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

3.4.1.2 Federal Endangered Species Act

In 1973, the federal Endangered Species Act (FESA) was established for the protection of threatened and endangered species and their habitats. Under Section 7 of this act, federal agencies are required to consult with the USFWS and National Marine Fisheries Service (NMFS) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. Section 9 of the FESA prohibits the take of threatened or endangered species, which is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

3.4.1.3 Migratory Bird Treaty Act

Pursuant to the Migratory Bird Treaty Act (MBTA) of 1918, federal law prohibits the taking of migratory birds, their nests, or their eggs (16 U.S.C., Section 703). In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). The USFWS enforces the MBTA (16 U.S.C. 703-711).

3.4.1.4 Tahoe Regional Planning Agency

Based on TRPA’s Initial Environmental Checklist, effects related to vegetation, wildlife, and aquatic resources were also evaluated based on whether the Proposed Project Alternative would:

- Result in substantial removal of riparian vegetation or other vegetation associated with critical wildlife habitat, either through direct removal or indirect lowering of the groundwater table;
- Introduce new vegetation that would require excessive fertilizer or water, or would provide a barrier to the normal replenishment of existing species;
- Introduce new species of animals into the Region, or result in a barrier to the migration or movement of wildlife;
- Result in a substantial change in the diversity or distribution of species, or number of any species of plants or wildlife;
- Substantially reduce the numbers of any unique, rare, or endangered species of plants or wildlife;
- Result in a change in the natural functioning of a late seral or old-growth ecosystem; or

- Result in deterioration of existing fish or wildlife habitat quantity or quality.

TRPA has established environmental thresholds, goals, and policies for vegetation, wildlife, and fisheries resources in several categories: uncommon plant communities; sensitive plants; late seral/old-growth ecosystems; special-interest, threatened and endangered wildlife; protected wildlife habitat; and fish habitat. TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances for these resources were used to analyze potential effects from the Proposed Project Alternative on biological resources.

3.4.2 Affected Environment

3.4.2.1 Existing Biological and Physical Conditions

The proposed project is located along a developed portion of US 50 located within the Sierra Nevada Ecoregion, characterized by a deeply dissected block fault that rises sharply and slopes gently toward the Central California to the west (NFWS, 2014). The vegetation consists of mixed conifer forests, which are dominated by white fir (*Abies concolor*) and lodgepole pine (*Pinus contorta*) on the western side and Jeffery pine (*Pinus jefferyi*) and lodgepole pine on the eastern side. Several high elevation mountain lakes, streams, and meadow/riparian areas are located within this ecoregion. Alpine conditions exist at the highest elevations (NFWS, 2014). The project is located within the montane coniferous forest community (USDA NRCS 2006) at approximately 6,250 to 6,380 feet in elevation.

The project area is located within the Lake Tahoe sub-section of the Great Basin Watershed (USGS, 2019). Topography throughout the action area is generally sloped east to west, down towards Lake Tahoe which is located approximately 0.6-mile west of the project boundary. One culvert exists within the project boundary and only conveys flow during rain events. Flow from rain events through this culvert has created an un-vegetated swale that lacks an ordinary high water mark or other jurisdictional features.

As previously stated, because the nature and extent of an impact differs by resource, individual study areas were defined to evaluate the existing condition and potential impact to each resource appropriately. The study area for federally listed species consists of the survey area, which is defined as a 34-acre area that was defined during early preliminary engineering, and also includes an additional 1-mile radius when appropriate. The project area is defined as an 8.89-acre area that is entirely located within the survey area and contains all direct construction related activities associated with the project. The action area is defined by the Endangered Species Act as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (51 Federal Register 19957). The action area should be determined based on consideration of all direct and indirect effects of the Proposed Project (50 CFR 402.02 and 402.14[b](2)). For plants, the study area consists of the survey/project area only. The study area adequately captures the action area as defined by the FESA.

3.4.2.2 Desktop Research and Field Survey

To obtain baseline knowledge of the biological resources within the study area, qualified biologists reviewed existing information and conducted field surveys. A list of federal ESA-listed species, critical habitat, and State Species of Greatest Conservation Need (SGCN) that may occur in the action area was received from USFWS’s Information for Planning and Consultation (IPaC) online system, the Nevada Natural Heritage Program (NNHP) data request tool, TRPA Code of Regulations, and LTBMU.

A project site visit to perform a habitat assessment within the survey area for ESA-listed species, state SGCN, LTBMU sensitive and management indicator species (MIS) and TRPA special

interest species was conducted on June 5, 2019 by Jacobs biologists. The biologists walked the survey area and examined the project corridor for rare plants and focusing on known and potential habitat for sensitive wildlife resources. The biologists noted any presence of sensitive natural resources, potential habitat and habitat features, and wildlife signs in field journals and documented occurrences using resource-grade GPS with sub-meter accuracy and with photo-documentation. The results of this survey was documented within the *Biological Assessment/Biological Evaluation for Round Hill Pines Access Road Project NV FLAP US 50(1) Douglas County, Nevada*. This document can be found in Appendix A.

Vegetation and Habitats

Montane coniferous forest vegetation exists within the action area and consists mainly of Ponderosa Pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), western juniper (*Juniperus occidentalis*), snowbrush (*Ceanothus velutinus*), antelope bitterbrush (*Purshia tridentate*), whiteleaf manzanita (*Arctostaphylos viscida*), serviceberry (*Amelanchier spp.*), mountain big sagebrush (*Artemisia tridentate ssp. vaseyana*), prickly phlox (*Leptodactylon pungens*), fireweed (*Chamerion angustifolia*), threadleaf sedge (*Carex philifolia*), needlegrass (*Stipa occidentalis*), Sandberg bluegrass (*Poa secunda*), smooth brome (*Bromus inermis*), cheatgrass (*Bromus tectorum*), and bulbous bluegrass (*Poa bulbosa*).

Sensitive Biological Resources

The following analysis includes sensitive biological resources which include species and biological communities that have special protection through the ESA, the TRPA Code of Regulations, the LTBMU forest service manual, local plans, policies and regulations; or that are otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. Sensitive biological resources evaluated as part of this analysis include special-status species and sensitive natural communities. These resources are addressed in the following sections.

Special-Status Species

Special-status species include plants and wildlife that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. For the purposes of this document, special status species are defined as species that are:

- Listed or proposed for listing as threatened or endangered under ESA,
- Designated as candidates for listing as threatened or endangered under ESA,
- Designated as a sensitive, special interest, or threshold species by TRPA,
- Designated as sensitive by the LTMBU,
- Designated as protected in Nevada and further classified as endangered or sensitive under Section 501 of the Nevada Revised Statutes and Section 503 of the Nevada Administrative Code,
- Listed plant species on Nevada's state list of fully protected species of native flora (Nevada Administrative Code, Section 527.010), also known as the Critically Endangered Species List,
- Designated as an At-Risk Species by the NNHP,
- Considered by the NNHP as a "watch list" or threatened plant species, or
- Identified as a species of conservation priority in the Nevada Wildlife Action Plan (NDOW 2013).

According to the IPaC and NNHP Data Request Tool results, seven ESA-listed species, state-listed, LTBMU sensitive, and/or TRPA sensitive species were identified as potentially occurring within the study area (Table 3.4-1). All seven of these species will be evaluated further for the presence of suitable habitat (e.g., soils, climate, disturbance, and plant communities) within the study area based on desktop analysis, project scoping, and field surveys. No critical habitat is located within the study area for any listed species. Table 1 summarizes the habitat and range information for each listed species evaluated during this analysis. A comprehensive review of the species list and justification for inclusion or exclusion for a detailed analysis can be found in the Biological Assessment/Biological Evaluation in Appendix A.

Table 3.4-1. Federal and State Listed Species Considered for Further Analysis

Scientific Name	Common Name	Regulatory Status ¹		General Habitat Description ²
		Federal	Special Status	
<i>Gulo gulo luscus</i>	North American Wolverine	PT	USFS	Uses caves, hollows, logs, rock outcrops, and burrows for cover. Presence is positively associated with higher elevation snow pack, snags, talus, and remote undisturbed wilderness with minimal motorized access and low human population densities.
<i>Rana sierra</i>	Sierra Nevada Yellow-legged frog	E	USFS	Large permanent water bodies or streams that are fishless and >4,000 feet. Associated with high-elevation water bodies, but they are capable of long distance travel, within water bodies, adults and tadpoles prefer shallower areas and shelves with solar exposure (features rendering these areas warmer).
<i>Oncorhynchus clarkia henshawi</i>	Lahontan Cutthroat Trout	T	GF, EM, S3	Inhabits lakes and streams and requires cool, well-oxygenated water. It is adapted to highly mineralized waters. In streams, the LCT uses rocky areas, riffles, deep pools, and areas under logs and overhanging banks.
<i>Rorippa subumbellata</i>	Tahoe yellowcress	-	CE, S1, USFS	Coarse sand and sandy soils of active beaches, stream inlets, beach dunes, and backshore depressions, generally within a few feet of the local water table, endemic to the shore zone of Lake Tahoe.
<i>Myotis thysanodes</i>	Fringed myotis	-	PM, S2, USFS	Roosts in crevices in rocks, cliffs, buildings, underground mines, caves, bridges, and in large, decadent trees. Mostly found in dry habitats (grasslands or deserts) interspersed with mature forests (especially ponderosa pine, piñon-juniper, or oak).
<i>Thomomys monticola</i>	Mountain pocket gopher	-	S3	Occur in mountain meadows and rocky slopes in pine, fir, and spruce. In rich moist soil, as well as gravelly or rocky ground. They can generally be found on open forest floor and at the edge of meadows. Mountain pocket gophers are found at high altitudes where temperatures are lower than the habitat of other pocket gopher species.
<i>Zapus princeps</i>	Western jumping mouse	-	S2	Occur in mountain meadows, marshes, and along banks of streams and ponds, in dense cover of tall grasses and herbs. They nest in burrows in well-drained mound or elevated banks or on the surface among vegetation.

¹ Regulatory Status

- = No Status
 CE = critically endangered plant
 E = federally listed as endangered
 EM = Nevada state symbol
 GF = game fish
 PM = protected mammal
 PT = federally proposed threatened

S1 = NNHP state rank 1
 S2 = NNHP state rank 2
 S3 = NNHP state rank 3
 T = federally listed as threatened
 USFS = USFS Lake Tahoe Basin
 Management Unit [LTBMU] sensitive

² Sources:

NNHP's Species Information (2019b)
 NatureServe Species Profiles (2019)

Federally Listed Species

Preliminary desktop data review identified three federally listed species that have a potential to occur within or near the study area. These three species have been evaluated to determine if potentially suitable habitat is located within the study area. A summary of the evaluation for

these species is provided below. The Biological Assessment/Biological Evaluation summarizes the regulatory status, habitat associations, and potential for occurrence of each of the special-status plants in more detail.

North American Wolverine

The North American wolverine is limited to alpine tundra, boreal and mountain forests (primarily coniferous) in the western mountains, especially large wilderness areas. However, dispersing individuals have been found far outside of usual habitats. They are usually in areas with snow on the ground in winter. Riparian areas may be important winter habitat. When inactive, wolverines occupy dens in caves, rock crevices, under fallen trees, in thickets, or similar sites. Wolverines are primarily terrestrial but may climb trees. (Jacobs 2020).

The North American wolverine is not known to currently occur on the LTBMU (USFS LTBMU 2016). The presence of suitable habitat is not located within the study area.

Sierra Nevada Yellow-legged Frog

The Sierra Nevada yellow-legged frog occupies the western Sierra Nevada north of the Monarch Divide (in Fresno County) and the eastern Sierra Nevada (east of the crest) in Inyo and Mono counties. The Sierra Nevada yellow-legged frog are rarely found more than 3 feet from water, usually near rocky stream beds, lakes, ponds, and tarns, typically with grassy or muddy banks and edges.

The presence of suitable habitat, such as fishless streams and lakes, is not present within the study area.

Lahontan Cutthroat Trout

Lahontan cutthroat trout historically occupy large freshwater and alkaline lakes, small mountain streams and lakes, small tributary streams, and major rivers of the Lahontan Basin of northern Nevada, eastern California, and southern Oregon, including the Truckee, Carson, Walker, Susan, Humboldt, Quinn, Summit Lake/Black Rock Desert, and Coyote Lake watersheds. Optimal stream habitat is characterized by clear, cold water with silt-free substrate and a 1:1 pool-riffle ratio. Streams should have a variety of habitats including areas with slow deep water, abundant instream cover (i.e., large woody debris, boulders, undercut banks), and relatively stable streamflow and temperature regimes.

No suitable habitat for the Lahontan cutthroat trout is present within the study area.

Special-Status Plants

Preliminary desktop data review identified six special-status plant species that may occur within the Action Area. Five out of six special-status plant species considered in this analysis are not expected to occur within the study area due to the absence of suitable habitat or existing disturbance from construction related activities. One species – Tahoe yellowcress – has a likelihood of potential suitable habitat located within the study area.

None of the special-status plant species were observed during the field survey of the study area. The Biological Assessment/Biological Evaluation summarizes the regulatory status, habitat associations, and potential for occurrence of each of the special-status plants in more detail.

Tahoe yellowcress

Tahoe yellowcress is a herbaceous perennial forb that can be found in Carson City, Douglas and Washoe counties, Nevada. This species is restricted to the shore zone of Lake Tahoe (NNHP 2001) and suitable habitat consists of sandy beaches. The TRPA study site open data for Tahoe Yellowcress at Round Hill shows populations of this species documented in 2016, but it shows no individuals recorded at this site in 2017 or 2018. The study site is located outside of the study area, approximately 150 feet to the west at the Round Hill Beach, on the shore of Lake Tahoe.

Suitable habitat of sandy beaches for Tahoe yellowcress does not occur within the study area and was not observed during field surveys.

Special-Status Wildlife

Preliminary desktop data review identified 25 special-status wildlife species that may occur within the study area. Twenty-two of these special-status species considered in this analysis are not expected to occur within the project area due to the absence of suitable habitat. Three species – fringed myotis, Western jumping mouse, and mountain pocket gopher – have a likelihood of potential suitable habitat located within the study area.

None of the special-status wildlife species were observed during the field survey. The Biological Assessment/Biological Evaluation summarizes the regulatory status, habitat associations, and potential for occurrence of each of the special-status plants in more detail.

Fringed myotis

The fringed myotis is associated with piñon-juniper, valley foothill hardwood and hardwood-conifers (USFS LTBMU 2016). This species uses caves, crevices, cliffs, mines, large decadent trees, and bridges and buildings for roosting, hibernacula, and maternity colonies. They roost under bark and in tree hollows. Medium to large diameter snags are important day and night roosting sites. There is increased likelihood of occurrence of this species as snags greater than 1 inch-diameter increases and percent canopy cover decreases. Large snags and low canopy cover, typical of mature, forest habitat types, offer warm roost sites.

Fringed myotis are dependent on older forest types. Keinath (2004) summarized this in the USFS Region 2 conservation assessment for the fringed myotis, indicating that this species depends on abundant large diameter snags and trees with thick loose bark. Thus, harvesting old growth and removal of snags for safety or fuel reduction reasons may reduce available roost sites (USFS LTBMU 2016). The study area is located an area with high human traffic, and because of this, the vegetation within the study area has been highly managed.

The action area lacks old growth trees and the snags have been removed. Although this site has appropriate forage habitat, there is not suitable habitat for roosting.

Western jumping mouse

Western jumping mice occur in mountain meadows, marshes, and along banks of streams and ponds, in dense cover of tall grasses and herbs. They nest in burrows in well-drained mounds, elevated banks, or on the surface among vegetation.

Suitable habitat for the Western jumping mouse was not observed during field surveys.

Mountain Pocket Gopher

Mountain pocket gophers occur in mountain meadows and rocky slopes in pine, fir, and spruce, in rich, moist soil as well as gravelly or rocky ground. They can generally be found on open forest floor and at the edge of meadows. Mountain pocket gophers are found at high altitudes where temperatures are lower than the habitat of other pocket gopher species. Suitable habitat of open forest floor or mountain meadows is not present within the study area.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through the TRPA Goals and Policies and TRPA Code of Regulations, Section 404 of the Clean Water Act, and other applicable regulations. Sensitive natural habitats may be of special concern to these agencies and conservation organizations for several reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

Sensitive habitats in the survey area include montane coniferous communities located on steep (30% slope) and moderately erodible soils. A majority of the study area is designated as Land Capability 4 (LC-4) and is not considered environmentally sensitive. A small portion of the project area is classified as LC-2, which is environmentally sensitive but is not considered a Stream Environment Zone (SEZ), see Section 3.6 “Earth Resources” for more discussion.

Noxious Weeds

The study area was surveyed for the presence of noxious weeds and no weeds from the Nevada Department of Agriculture noxious weed list or the LTBMU invasive plant list were identified on site. Bull thistle (*Cirsium vulgare*) is a documented noxious weed that has been previously identified on LTBMU lands near the project area, however it was not observed during field surveys.

3.4.3 Environmental Consequences and Mitigation Measures

This discussion is organized to first address general elements of the Proposed Project Alternative that could directly and indirectly affect all special status species permanently and/or during construction. Species-specific effects analyses are then addressed based on species categories.

The Proposed Project Alternative effects discussed below are a summary of the analysis completed for this project including the biological assessment/biological evaluation and prepared for this project. For a more detailed analysis of impacts and effects, refer to this report.

3.4.3.1 No Action Alternative

Under the No Action Alternative, the Round Hill Pines Resort access road and US 50 intersection would not be relocated to the north and the access road would remain in the existing location. Safety improvements to US 50 for visitors entering into the Round Hill Pines Resort would not be constructed. There would be no construction related impacts or direct adverse effects to sensitive habitats (LC-2). However, there would be continued use of the Round Hill Pines Resort area because it is one of the few public day-use only areas along Lake Tahoe. This continued use could result in minor adverse effects to habitat and species therein, which would be similar to existing conditions. Thus, the impact to biological resources would be less than significant.

3.4.3.2 Proposed Project Alternative

Vegetation and Habitats

Implementation of the Proposed Project Alternative would result in removal and trimming of plants and habitat in the project area. Some of these impacts would be short-term as temporarily impacted areas would be revegetated with native plant species appropriate for the project area. Temporary BMPs would be installed as discussed below to minimize erosion and protect receiving waters from sedimentation and pollutant introduction. Any necessary BMPs would remain in place until sufficient vegetation cover has established and permanent stabilization of temporarily impacted areas occurs. The utilization of a Stormwater Pollution Prevention Plan and associated stormwater BMPs, would protect freshwater and lacustrine communities from the erosion and sediment potential that exists from vegetation removal and ground-disturbing activities when soil is exposed and subject to erosive forces.

The short-term loss of vegetation would constitute a temporary habitat loss to those that may use that habitat for nesting or foraging. Permanent impacts would constitute a permanent habitat loss and would result from placement of the permanent fill material for construction of the new access road, widening along US 50 and associated features. Sensitive habitats have been identified and impacts to these habitats were avoided and minimized to the greatest extent possible. For purposes of analysis in this EA, the entire project construction limits were assumed to be permanently impacted because specific contractor means and methods are not known in preliminary design. Actual impacts would likely be less. Impacts would be highly localized

within the construction limits. The anticipated permanent and temporary impacts by habitat type is summarized in Table 3.4-2, below.

Table 3.4-2: Project Impacts by Habitat Type from the Proposed Project Alternative

Habitat Type	Permanent Disturbance (acres), includes existing disturbed areas	Temporary Disturbance Estimate (acres)
Montane Coniferous Forest (TRPA designated Land Capability District 2)	1.5	--
Montane Coniferous Forest (TRPA designated Land Capability District 4)	3.2	1.7
US Highway 50 Corridor	3.2	4.2
Total	7.9	5.9

Tree Removal

As shown in Table 3.4-3, the Proposed Project Alternative would remove an estimated 133 trees that are less than 24-inches diameter at breast height (dbh), 99 of which are greater than 14-inches dbh (i.e. the tree size that would require a TRPA permit for removal). The trees to be removed would primarily include Ponderosa pine and Douglas fir trees. Nineteen trees larger than 24 inches dbh would be removed.

Table 3.4-3: Number and Size Classes of Trees Removed by Proposed Project Alternative

Diameter at Breast Height (dbh) in Inches (")			
Location	6 to 14"	14" to 24"	>24"
NDOT Right of Way	0	7	2
LTCMU Right of Way	34	92	17
Total Trees Removed	152		

With limited exceptions, Section 61.1.4 "Old Growth Enhancement Protections," of the TRPA Code prohibits the removal of trees greater than 24 and 30 inches dbh in eastside and westside forest types. The entire project area has been classified as montane coniferous forest habitat the supports eastside forest communities. Section 61.1.4(A)(7) of the TRPA Code states that for Environmental Improvement Projects (EIP), "Trees larger than 24 inches dbh in eastside forest types may be removed when it is demonstrated that the removal is necessary for the activity." The Round Hill Pines Access Project is an EIP Project (EIP No. 04.01.03.0137) and is subject to this Code provision and allowance, so eastside forest trees greater than 24 inches dbh in the project area may be removed after demonstrating that removal is necessary.

If a project would result in "substantial tree removal" as defined by TRPA, a tree removal or harvest plan must be prepared by a qualified forester. Substantial tree removal is defined in Section 61.1.8 of the TRPA Code as activities on project areas of 3 acres or more and proposing the removal of more than 100 live trees 14 inches dbh or larger. The Proposed Project Alternative will remove approximately 109 live trees 14 inches dbh or larger from property that is owned and managed by LTCMU and 9 live trees 14 inches dbh or larger from property that is owned and

managed by NDOT. The tree removal associated with the Proposed Project Alternative that would occur on LTBMU property is not subject to the definition of “substantial tree removal” as defined in Section 61.1.8 of the TRPA Code because of the existing memorandum of agreement between TRPA and LTBMU. Tree removal that would occur on NDOT property would not qualify as a “substantial tree removal”; therefore, a tree removal and harvest plan would not be required.

During the design of the Proposed Project Alternative, efforts to avoid and minimize the removal of live trees, particularly greater than or equal to 24 inches dbh, would be applied to the extent practicable. Ground disturbance would be minimized to the extent practicable to avoid native vegetation and habitat loss. The estimated loss of habitat as a result of the Proposed Project Alternative would not substantially reduce the quantity or quality of these habitats in the region and would not result in a change in diversity or distribution of species in the region or result in a substantial change in local population numbers of any common plant or tree species or any unique, rare, or endangered species of plants or animals.

Wildlife and Special Status Wildlife Species

In addition to above discussed vegetation removal and associated habitat impacts, short-term impacts may also be associated with noise and disturbance during construction activities as some wildlife may be deterred from utilizing the project area. This could include reduction in nesting, foraging/hunting, roosting, or breeding in or near the project area, and the presence of noise may affect some species in adjacent habitats or in overflight.

In accordance with Section 7 of the ESA, the FHWA-CFLHD prepared a Biological Assessment (BA) and a Biological Evaluation (BE) dated July 2020. Based on extensive literature research, desktop review, and field survey, it has been determined that the Proposed Project Alternative would have **no effect** on any federally listed, proposed or candidate species or any proposed critical habitat. The Proposed Project Alternative will not jeopardize the continued existence nor lead to a decline in population that could lead to federal listing of the Tahoe yellowcress, fringed myotis, mountain pocket gopher, or western jumping mouse.

3.4.3.3 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to biological resources. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure BIO-1: Minimize ground and vegetation disturbance, and limit construction and staging footprints.

Mitigation Measure BIO-2: Minimize removal of trees that are 24-inches diameter at breast height (dbh) or greater.

Mitigation Measure BIO-3: Coordinate tree felling schedule with the Lake Tahoe Basin Management Unit to minimize effects to migratory birds.

Mitigation Measure BIO-4: Prevent the contamination of construction-related materials by noxious weeds and invasive plant species.

Mitigation Measure BIO-5: Revegetate/landscape using appropriate native planting mixes.

3.4.4 Consequences for TRPA Environmental Threshold Carrying Capacities

Fish Habitat

This section summarizes the effects of implementing the Proposed Project Alternative on the environmental thresholds established by TRPA for fish habitat. Four fish habitat Indicator Reporting Categories have been established by TRPA:

- Lake Habitat,
- Stream Habitat,
- Instream Flows, and
- Lahontan Cutthroat Trout.

Lake Habitat

The Threshold Standard for the Lake Habitat Indicator Reporting Category is to apply a non-degradation standard to fish habitat in Lake Tahoe and achieve the equivalent of 5,948 total acres of excellent (prime) habitat. The current status of this Indicator Reporting Category is attainment with the Threshold Standard. Implementing the Proposed Project Alternative would not affect Lake Tahoe or change fish habitat conditions in the lake; therefore, implementing the Proposed Project Alternative would not affect attainment of this Threshold Standard.

Stream Habitat

The Threshold Standard for the Stream Habitat Indicator Reporting Category is to “maintain 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat.” The current status of this indicator is unknown due to lack of data (TRPA, 2016). The project area does not contain any stream habitat. Implementing the Proposed Project Alternative would not affect attainment of this Threshold Standard.

Instream Flows

The Threshold Standard for the Instream Flow Indicator Reporting Category states that “until instream flow standards are established in the Regional Plan to protect fishery values, a non-degradation standard shall apply to instream flows.” The current status of the threshold is attainment. The project area does not contain any permanent, intermittent or ephemeral stream flow. Implementing the Proposed Project Alternative would not affect attainment of this Threshold Standard.

Lahontan Cutthroat Trout

The Threshold Standard for the Lahontan Cutthroat Trout Indicator Reporting Category is to “support, in response to justifiable evidence, State and Federal efforts to reintroduce Lahontan cutthroat trout.” The current status of the threshold is attainment. Implementing the Proposed Project Alternative would not change habitat conditions for Lahontan cutthroat trout in the project vicinity, or conflict with reintroduction efforts. No aquatic habitats exist in the project area. Therefore, implementing the Proposed Project Alternative would not affect attainment of the Threshold Standard.

Vegetation

This section summarizes the effects of implementing the Proposed Project Alternative on the environmental thresholds established by TRPA for vegetation. Four vegetation Indicator Reporting Categories have been established by TRPA:

- Common Vegetation,
- Uncommon Plant Communities,

- Sensitive Plants, and
- Late Seral and Old Growth.

Common Vegetation

The Threshold Standard for the Common Vegetation Indicator Reporting Category includes increasing plant and structural diversity of forest and other vegetation communities through appropriate management practices as measured by diversity indices of native vegetation community richness, relative abundance, and pattern. The Common Vegetation Indicator Reporting Category includes separate standards for diversity, pattern of vegetation types and relative abundance for conifer forest, meadow, wetland, shrub, and deciduous riparian vegetation types that are applied basin-wide. The Indicator Reporting Category also applies a non-degradation Threshold Standard for native deciduous trees, wetlands, and meadows to provide for increases in riparian associations consistent with the Soil Conservation Threshold Standard.

For conifer forests, the TRPA Threshold Standard is to maintain 15–25 percent of yellow pine and red fir forests in seral stages other than mature to ensure that relatively young age classes of these forest types are represented in the Tahoe Region. TRPA's metric for this Threshold Standard is the relative proportion of tree stands dominated by small and large diameter trees in seral stages other than mature (less than 10.9 inches in dbh). The Threshold Standard for shrub vegetation is to maintain no more than 25 percent of undisturbed vegetation cover in the basin in shrub-dominated associations. For meadow, wetland, and deciduous riparian vegetation types, the Threshold Standard is to maintain at least 4 percent of each of these types in the Tahoe Region. The current status of the common vegetation threshold is nonattainment (considered worse than target) overall and for the specific indicators of: 1) proportion of red fir and yellow pine stands in small diameter size classes; and 2) relative abundance of meadow, wetland, and deciduous riparian vegetation types. The Threshold Standards for the indicators of community species richness and relative abundance of the shrub vegetation type are attainment (at or better than target condition).

Implementing the Proposed Project Alternative could affect approximately 4.7 acres of conifer forest (Ponderosa Pine, a type of yellow pine forest) see Table 3.4-2. Implementing the Proposed Project Alternative would not affect the attainment status of the Threshold Standards for conifer forests because it would not affect the overall diversity or pattern of common vegetation types throughout the Tahoe Region, or reduce the amount of yellow pine and red fir stands within seral stages other than mature and/or characterized by small size classes. Although tree and other vegetation removal would occur within the Ponderosa pine forest, the number, distribution, and sizes of trees removed would not substantially affect overall canopy cover or reduce the abundance of this vegetation type on the landscape. The values in Table 3.4-2 represent temporary and permanent effect areas within the montane conifer forest understory as a result of the Proposed Project Alternative construction (i.e., the ground-level footprint). Because tree removal within these forest vegetation types would be minimized or avoided in some locations by constructing around trees where feasible, the loss or conversion of forest canopy would be less than the impact values.

Implementing the Proposed Project Alternative would not result in the permanent disturbance or removal of any shrub-dominated vegetation communities because they are not present within the Project Area. Therefore, implementing the Proposed Project Alternative would not affect the attainment status of the common vegetation Threshold Standard for shrub communities.

Implementing the Proposed Project Alternative would not result in loss of any deciduous riparian vegetation, wetland or meadow vegetation because it is not present within the Project Area. Therefore, it would not conflict with the Threshold Standard of maintaining at least 4

percent meadow and wetland vegetation and 4 percent deciduous riparian vegetation in the Tahoe Region.

Uncommon Vegetation

The Threshold Standard for the Uncommon Plant Communities Indicator Reporting Category calls for providing the non-degradation of the natural qualities of any plant community that is uncommon to the Tahoe Region or of exceptional scientific, ecological, or scenic quality. The current status of this Threshold Standard is attainment overall, with some individual locations of uncommon plant communities in nonattainment. No uncommon plant communities are known to occur within the project area. Therefore, the Proposed Project Alternative would not contribute to non-attainment of this Threshold Standard.

Sensitive Plants

The Threshold Standard for the Sensitive Plants Indicator Reporting Category is to maintain the following minimum number of population sites for TRPA special-interest plant species: Galena Creek rockcress (*Arabis rigidissima* var. *demota*) (seven sites), long-petaled lewisia (*Lewisia longipetala*) (two sites), Cup Lake draba (*Draba asterophora* var. *macrocarpa*) (two sites), Tahoe draba (*Draba asterophora* var. *asterophora*) (five sites), and Tahoe yellow cress (*Rorippa subumbellata*) (26 sites). The current status of this threshold is attainment overall for long-petaled lewisia, Cup Lake draba, Tahoe draba, and Tahoe yellow cress. The attainment status of the Galena Creek rockcress indicator is unknown because of insufficient information. As described in Section 4.4.2, “Environmental Consequences and Mitigation Measures,” no TRPA special-interest plant species are expected to occur in the project area, due to existing disturbance, habitat modification, absence of habitat conditions for those species, or lack of recent occurrence records in the area. Additionally, no special-status plant species were observed during the sensitive species survey of the project area. Therefore, the Proposed Project Alternative would not affect the attainment status of the Sensitive Plants Threshold Standard.

Late Seral and Old Growth

The Threshold Standard for the Late Seral/Old Growth Indicator Reporting Category is to attain and maintain a minimum of 55 percent by area of forested lands within the Tahoe Region in a late seral or old-growth condition, distributed across elevation zones. Forested lands within TRPA-designated urban areas are excluded in the calculations for Threshold Standard attainment. The current status of this Threshold Standard is nonattainment (considerably worse than target) overall and for each elevation zone. None of the Ponderosa pine forest in the project area is considered late seral/old growth forest. Therefore, implementing the Proposed Project Alternative would not affect the attainment status of this Threshold Standard.

Wildlife Habitat

This section summarizes the effects of implementing the Proposed Project Alternative on the environmental thresholds established by TRPA for wildlife habitat. Two wildlife habitat Indicator Reporting Categories have been established by TRPA:

- Special Interest Species, and
- Habitats of Special Significance.

Special Interest Species

The Threshold Standard for the Special Interest Species Indicator Reporting Category is to provide a minimum number of population sites for six TRPA special-interest wildlife taxa: northern goshawk (*Accipiter gentilis*) (12 sites including a Protected Activity Center), osprey (*Pandion haliaetus*) (four sites), bald eagle (*Haliaeetus leucocephalus*) (two winter sites and one nesting site), golden eagle (*Aquila chrysaetos*) (four sites), peregrine falcon (*Falco peregrinus*) (two

sites), and waterfowl (18 sites). Mule deer (*Odocoileus hemionus*) is also a special-interest species; however, no threshold site number for deer has been specified. Lands within TRPA-designated urban areas are excluded from the standards for threshold attainment. The current status of this Indicator Reporting Category is attainment of the Threshold Standard overall for bald eagle nesting, osprey, and peregrine falcon. The current status for northern goshawk and waterfowl is nonattainment. The attainment status for golden eagle is unknown due to insufficient information. No attainment status has been established for bald eagle wintering or deer.

The Proposed Project Alternative would not affect designated waterfowl threshold areas or breeding sites or disturbance zones for northern goshawk, bald eagle, golden eagle, and peregrine falcon. The Proposed Project Alternative is not expected to affect the distribution, breeding productivity, viability, or the regional population of any of these TRPA special-interest wildlife species. Therefore, implementing the Proposed Action Alternative would not affect the attainment status for northern goshawk, bald eagle, golden eagle, peregrine falcon, or waterfowl.

Although deer is a TRPA special-interest species, no Threshold Standard has been adopted and no attainment target applies to this species. However, TRPA does not permit projects that would degrade fawning habitat or fragment known migration corridors (TRPA 2012). The project area is not expected to support fawning mule deer and does not provide important foraging or migratory habitat.

Habitats of Special Significance

The Threshold Standard for the Habitats of Special Significance Indicator Reporting Category is to apply a non-degradation standard to habitats consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations. These opportunities include but are not limited to preserving existing naturally functioning SEZ lands in their natural hydrologic condition; restoring all disturbed SEZ lands in undeveloped, unsubdivided lands; and restoring 25 percent of the SEZ lands that have been identified as disturbed, developed, or subdivided, to attain a 5 percent total increase in the naturally functioning SEZ land. The current status of the Indicator Reporting Category is attainment with the Threshold Standard.

None of the habitats identified in the Project Area are classified as riparian and/or SEZ. Therefore, implementing the Proposed Project Alternative would not affect the attainment status of this Threshold Standard.

3.5 Cultural Resources

This section describes impacts expected to cultural resources, including historical and archeological resources. Historic built-environment resources may include engineering structures, buildings, objects, and monuments. Archaeological sites include prehistoric and historic evidence of past human occupation of the landscape, including village sites, shell middens, tool and food processing sites, privies, and refuse deposits. If a project would result in the alteration or destruction any of these resources, impacts to cultural resource may result.

3.5.1 Regulatory Setting

3.5.1.1 National Environmental Policy Act

NEPA establishes that the federal government use all practicable means to “assure for all Americans . . . culturally pleasing surroundings,” and “preserve important historic, cultural, and natural aspects of our national heritage . . .” (42 United States Code [U.S.C.] 4331[b][2]).

3.5.1.2 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. 300101 - 307108), and its implementing regulations, Protection of Historic Properties (36 CFR 800), requires federal agencies to take into account the effects of their actions on historic properties for any federal undertaking. Historic properties are defined as those that are included in the National Register of Historic Places (NRHP) or that meet specific criteria (are “eligible”) for listing in the NRHP, which is the official list of America’s historic places worthy of preservation. An effect on a historic property is “an alteration to the characteristics of a historic property qualifying it for inclusion or eligibility for the NRHP” (36 CFR 800.16).

3.5.1.3 Tahoe Regional Planning Agency

Based on TRPA’s Initial Environmental Checklist, effects related to archaeological and historical resources were also evaluated based on whether the Proposed Project Alternative would:

- Result in an alteration of or adverse physical or aesthetic effect to a significant archaeological or historical site, structure, object or building;
- Involve a property with any known cultural, historical, and/or archaeological resources, including resources on TRPA or other regulatory official maps or records;
- Involve a property associated with any historically significant events and/or sites or persons;
- Have the potential to cause a physical change which would affect unique ethnic cultural values or;
- Restrict historic or pre-historic religious or sacred uses within the potential impact area.

TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances were used to analyze potential effects from the Proposed Project Alternative on cultural resources.

3.5.1.4 Nevada Revised Statute 383 Historic Preservation and Archaeology

Nevada Revised Statute 383.121 states that all departments, commissions, boards and other agencies of the State and its political subdivisions shall cooperate with the Nevada SHPO in order to salvage or preserve historic, prehistoric or paleo-environmental evidence located on property owned or controlled by the United States, the State of Nevada or its political subdivisions.

TRPA permit acknowledgement, but the information contained herein is representative of the minor nature of the land coverage changes. Because the coverage increases associated with the Proposed Project Alternative would occur in accordance with TRPA regulations, the project would not result in adverse effects as it relates to land coverage and land capability.

Table 3.6-2: Preliminary Land Coverage Increases for the Proposed Project Alternative

Land Capability District	Impervious Pavement Addition	Impervious Pavement Removal	Net Increase
LCD 2	0.3 acre	0.04 acre (Existing Bike Trail Segment)	0.26 acre
LCD 4	0.34 acre	0 acre	0.34 acre

3.6.4 Consequences of TRPA Environmental Threshold Carrying Capacities

This section describes the effects of implementing the Proposed Project Alternative on the thresholds established for soil conservation by TRPA. Two soil conservation threshold reporting categories have been established by TRPA:

- Impervious Cover (land coverage), and
- Stream Environment Zone (SEZ).

According to the 2015 Threshold Evaluation (TRPA 2015), status for the Impervious Cover threshold reporting category within LCD 2 is "Somewhat worse than target" and LCD 4 is "Considerably better than target".

Impervious Cover

On a region-wide basis, Bailey land capability class LCD 4 is currently in compliance. Land Capability District 2 is not in attainment (TRPA 2015), because existing coverage is in excess of the base allowable for these LCDs. Within LCD 2, Table 3.5.2.3 shows a net impervious pavement addition of 0.26 acre which includes the removal of a portion of paved bike trail (0.04 acre). Work at this location includes widening along the west side of US 50 for the median left turn bay and northbound acceleration lane and a small portion of the relocated Round Hill Pines access road. Within LCD 4, Table 3.5.2.3 shows a net impervious pavement addition of 0.34 acre of new impervious pavement added for the relocated Round Hill Pines access road.

The Proposed Project Alternative would result in a very minor increases in land coverage in LCD 2 (0.24 acre) and (0.34 acre) LCD 4. Any new coverage associated with the Proposed Project Alternative would be consistent with TRPA land coverage regulations and consistent with what had already been contemplated for the project in the TRPA Regional Plan. Implementation of the project would not impede progress toward attainment of the TRPA threshold reporting category for Impervious Cover.

Stream Environment Zone

Attainment of the SEZ threshold is tracked basin wide and tracked for three categories: naturally functioning SEZs; SEZs in undeveloped, un-subdivided lands; and SEZs in disturbed, developed, or subdivided areas. The SEZ threshold has a nonattainment status. The Proposed Project Alternative is not located within a SEZ and would not impede or degrade the attainment of the SEZ threshold reporting category.

3.7 Hydrology and Water Quality

This section describes the existing hydrologic and water quality conditions within the project area and provides an analysis of the potential effects due to implementation of the Proposed Project Alternative. This analysis includes review of surface water, runoff patterns, and water quality. A discussion of effects to coverage and potential land surface erosion is provided in Section 3.6, "Earth Resources: Geology, Soils, Land Capability, and Coverage." A discussion of effects to sensitive habitat is found in Section 3.4, "Biological Resources: Aquatic Resources, Vegetation, and Wildlife."

3.7.1 Regulatory Setting

3.7.1.1 Clean Water Act (Public Law 92-500)

Section 404

The Clean Water Act (CWA) consists of the Federal Water Pollution Control Act of 1972 and subsequent amendments. The CWA provides for the restoration and maintenance of the physical, chemical, and biological integrity of the nation's waters. Section 404 of the act prohibits the discharge of fill material into waters of the United States, including wetlands, except as permitted under separate regulations by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA). To discharge dredged or fill material into waters of the United States, including wetlands, Section 404 requires projects to receive authorization from the Secretary of the Army, acting through the USACE. Waters of the U.S. are generally defined as "...waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; territorial seas and tributaries to such waters."

Section 401

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification for the discharge. The certification must be obtained from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over the affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401. Water quality certification requires evaluation of potential impacts in light of water quality standards and CWA Section 404 criteria governing discharge of dredged and fill materials into waters of the United States. The federal government delegates water pollution control authority under CWA Section 401 to the states.

Section 402

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate discharges of pollutants into waters of the United States. An NPDES permit sets specific discharge limits for point sources discharging pollutants into waters of the United States and establishes monitoring and reporting requirements, as well as special conditions. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The State of Nevada Department of Environmental Quality is responsible for implementing the NPDES permit system.

Section 303d

Section 303(d) of the CWA requires states to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. EPA must either approve a TMDL prepared by the state or disapprove the state's TMDL and issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

3.7.1.2 Federal Antidegradation Policy

The Federal Antidegradation Policy was enacted to provide protection to high-quality water resources of national importance. It directs states to develop and adopt statewide antidegradation policies that include protecting existing instream water uses and maintaining a level of water quality necessary to protect those existing uses and the water quality of high-quality waters. In EPA's Clean Water Act regulations regarding water quality standards (40 CFR Sec. 131.12(a)(3)), the criteria for requiring an antidegradation standard includes: "where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected." The EPA has designated Lake Tahoe an Outstanding National Resource Water (ONRW). ONRWs are provided the highest level of protection under EPA's Antidegradation Policy, stipulating that states may allow some limited activities that result in temporary and short-term changes to water quality, but such changes should not adversely affect existing uses or degrade the essential character or special uses for which the water was designated an ONRW. The EPA interprets this provision to prohibit new or increased discharges to ONRWs that would degrade water quality.

3.7.1.3 Floodplain Management Executive Order (11988)

Floodplain Management Executive Order 11988 (May 24, 1977) directs all federal agencies to evaluate potential effects of any actions it may take in the floodplain and to avoid all adverse impacts associated with modifications to floodplains. It also directs federal agencies to avoid encroachment into the 100-year floodplain, whenever there is a practicable alternative, and to restore and preserve the natural and beneficial values served by the floodplains.

The Federal Emergency Management Agency (FEMA) oversees floodplain management and runs the National Flood Insurance Program (NFIP) adopted under the National Flood Insurance Act of 1968. FEMA prepares Flood Insurance Rate Maps (FIRM) that delineate the regulatory floodplain to assist local governments with land use and floodplain management decisions to meet the requirements of the NFIP. In general, the NFIP mandates that development is not to proceed within the 100-year regulatory floodplain, if the development is expected to increase flood elevation by one foot or more. Very limited development is allowed in designated 100-year floodways (i.e., flood flow channels and areas with sufficient directional flow velocity of 100-year floodwaters). As discussed in Section 3.2.3, the Proposed Project would not substantially modify the floodplain topography therefore, no impacts to floodplains are anticipated.

3.7.1.4 Tahoe Regional Planning Agency

Based on TRPA's Initial Environmental Checklist, effects related to hydrology and water quality were evaluated based on whether the Proposed Project Alternative would result in:

- Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff so that a 20-year, 1-hour storm event (approximately 1-inch per hour) cannot be contained on the site;
- Alterations to the course or flow of 100-year flood waters;
- Change in the amount of surface water in any water body;
- Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity;
- Alteration of the direction or rate of groundwater;
- Change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations;
- Substantial reduction in the amount of water otherwise available for public water supplies;
- Exposure of people or property to water related hazards such as flooding and/or wave action from a 100-year storm occurrence or seiches; or
- Location of the project within 600 feet of a drinking water source.

TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances were used to analyze potential effects from the Proposed Project Alternative on hydrology and water quality.

3.7.2 Affected Environment

3.7.2.1 Regional Hydrology

The Round Hill Pines Project is located within the South Stateline Hydrologic Unit of the larger Lake Tahoe Hydrologic Unit, located east of the California/Nevada border in the Sierra Nevada. The project is located within the McFaul Creek Watershed, which is a subwatershed of the Lake Tahoe Hydrologic Unit. McFaul Creek is located just outside of the project area to the north and drains into Lake Tahoe.

3.7.2.2 Local Watershed Description

McFaul Creek is located just north of the project area and discharges to Lake Tahoe. Historically, the McFaul Creek watershed was subject to both logging and grazing disturbances. The watershed was logged extensively in the late 1880s, like much of the surrounding area in the Lake Tahoe Basin, to supply timber to mining and development during the Comstock Era.

3.7.2.3 100-year Floodplain

The Federal Emergency Management Agency (FEMA) establishes base flood heights for the 100-year flood zone. The 100-year flood zone is defined as the area that could be inundated by a flood that has a 1-percent probability of occurring in any given year, or once every 100 years. The project is located in an area that has been delineated as Zone D on the FEMA Flood Insurance Rate Map (FIRM). Zone D defines areas that have no analysis of flood hazards and are undetermined, but possible.

3.7.2.4 Jurisdictional Waters of the United States

A determination of potential jurisdictional waters of the U.S. within the project area was completed on May 16, 2018 by CFLHD staff during the project scoping trip. Waters of the U.S. include all essential surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR Section 328.3[c]). Non-jurisdictional waters are not considered waters of the U.S. and are identified in 33 CFR Section 328.3[b].

The 2018 determination did not identify any potential waters of the U.S. or wetlands within the project area.

3.7.2.5 Surface Water Quality

Lake Tahoe is classified by limnologists as an oligotrophic lake, which means the lake has very low concentrations of nutrients that can support algal growth leading to clear water and high levels of dissolved oxygen (Tahoe Environmental Research Center, 2020). The most recent scientific research points to inorganic fine sediment particles as the primary pollutant of concern impairing Lake Tahoe’s transparency. This finding is based on the ability of inorganic fine sediment particles to efficiently scatter light and decrease observed transparency (Swift et al. 2006). Additional pollutants of concern include phosphorus and nitrogen, which stimulate algal growth in the lake contributing to declines in transparency and the quality of the near-shore environment. Nutrient and sediment sources include soil erosion, fertilizer application, automobile and motorized watercraft operation, application and breakdown of winter deicers and traction abrasives, as well as others.

3.7.2.6 Groundwater

The Round Hill Pines Access project is located within the Lake Tahoe Basin groundwater basin within the Truckee River Region. Water bearing formations within the southern portion of the Lake Tahoe Basin consist of exposed Tertiary and Quaternary age glacial, fluvial, and lacustrine sediments, collectively referred to as basin-fill deposits (DWR, 2004). Although groundwater studies have not been undertaken specific for this project, a previous FHWA-CFLHD project known as the South Demonstration Project reported other groundwater investigations in the vicinity (Burke Creek Meadow and Beach Club on Lake Tahoe site [at the west end of Kahle Drive]) show groundwater levels ranging from 6.5 feet to 10 feet below ground surface (bgs), and shallow groundwater caused by a perched aquifer (i.e., an aquifer “perched” above the main water table by a confining layer below).

3.7.3 Environmental Consequences and Mitigation Measures

Significance Criteria

The Round Hill Pines Access Project would result in a significant adverse effect on hydrology or water quality and attainment of water quality thresholds if it would:

- result in any permanent or long-term degradation of Lake Tahoe water clarity;
- substantially alter existing surface water drainage patterns or cause existing or planned stormwater drainage systems to exceed capacity;
- interfere with groundwater movement or reduce groundwater infiltration, except as permitted under Section 33.3.6(A)(2) of the TRPA Code;
- degrade a source water supply;

- cause substantial interference with or adverse effects on littoral processes in the project area;
- place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary, FIRM, or other flood hazard delineation map; or
- place structures or fill within a 100-year flood hazard area that would impede or redirect flood flows.

Littoral drift refers to the transportation of sediments, such as sand, along the shoreline, at an angle to the shoreline. Wave and current actions near the lake shoreline can affect sediment transport and, in turn, accumulation of beach sand along the shore and sediment deposition in the near-shore area. Disruption of these actions, then, can alter natural deposition processes. This can, in turn, alter near-shore and shoreline erosion. The Proposed Project Alternative would not result in the placement of structures at an elevation that would be subject to wave and current actions of Lake Tahoe; therefore, the potential for the proposed project to affect littoral processes is not discussed. Similarly, the proposed project would not result in the placement of housing and structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary; therefore, the potential for the project to place structures or housing within a 100-year flood hazard area is not discussed.

Method and Assumptions

The evaluation of potential hydrology and water quality effects associated with implementation of the Proposed Project Alternative was based on a desktop review of available data, applicable federal, state, and TRPA regulations, codes, guidelines, and consultation with the project team.

3.7.3.2 No Action Alternative

Under the No Action Alternative, the Round Hill Pines Resort access road and US 50 intersection would not be relocated to the north. The No Action Alternative would not result in any effects related to erosion or release of pollutants to receiving waters from construction activities.

3.7.3.3 Proposed Project Alternative

Soil Erosion and Sedimentation and/or Release of Pollutants to Nearby Water Bodies

Construction activities would involve tree and vegetation removal, grading, excavation, and temporary stockpiling of soils, all of which could expose soils to erosion. In addition, there would be onsite staging of construction equipment and vehicles, as well as construction-related vehicle trips. The potential exists for fuels and other construction-related chemicals to be accidentally spilled or leaked, or otherwise be discarded into nearby drainages during construction of the Proposed Action Alternative.

Excavation, fill slopes, and grading activities necessary to construct the Proposed Project Alternative would occur within moderate erodible soils, along steep topography, and in close proximity to Lake Tahoe. Once disturbed, soils on sensitive lands (primarily TRPA designated LCD 2 areas) within the project area could become unstable and susceptible to increased rates of land surface erosion. Furthermore, successful long-term stabilization of soils disturbed on sensitive lands by project construction using soil restoration and revegetation techniques would present a number of challenges given the lack of nutrients within the soil, low amounts of precipitation during the summer growing season, and steep topography.

A Storm Water Pollution Prevention Plan (SWPPP) would be required as part of the NPDES permitting process. The SWPPP would describe the site conditions, erosion and sediment controls, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and

management controls unrelated to stormwater. All temporary BMPs identified in the SWPPP would be implemented during site development activities. Water quality controls outlined in the SWPPP must be consistent with TRPA and Nevada Department of Environmental Protection (NDEP) guidelines and would be required to ensure that runoff water quality meets or surpasses TRPA waste discharge effluent limits and maintains beneficial uses of Lake Tahoe, as defined by the Nevada Administrative Code (NAC) 445A.191. As part of the SWPPP, stormwater quality sampling would be described in detail that identifies sampling locations, protocols, and reporting mechanisms would be the responsibility of the contractor. A spill prevention and contingency plan would be established and maintained for proposed construction activities, and the construction contractor(s) would be required to maintain a cache of materials to contain and treat any potential spills. A Rain Event Action Plan will be included in the SWPPP to monitor the weather on a daily basis and will implement pre-defined actions within the SWPPP to avoid discharges during rain events.

Any disturbances within the Project Area, such as clearing and grubbing, grading, and cut/fill, would be limited to the period from May 1 to October 15 without special authorization from the appropriate agencies. Pursuant to TRPA Code of Ordinances 64.2, grading activities would be prohibited during winter months, unless approved by TRPA. Exposed areas of disturbance would be required to be protected during winter months using approved methods. Due to the number of trees that need to be cleared, tree felling work may be conducted during the winter months. Removing trees during the winter would minimize the ground disturbance and impacts to migratory birds. The trees would only be cut and the tree stumps would remain in the ground until the grading season begins. Further coordination with TRPA would be conducted during final design stages of the project. Permanent BMPs would be incorporated into the project design that would minimize soil erosion within the project area. To the maximum extent possible, permanent BMPs would be installed prior to construction.

TRPA- and NDEP-identified water quality control features such as revegetation, erosion control measures, and detention and infiltration basins have been successful in controlling water quality and avoiding water quality effects (metals and organic compounds associated with stormwater are typically dispersed within the first few feet of the soil of the retention basins prior to reaching groundwater). Technical sources (e.g., the NDEP BMP Handbook; the TRPA Handbook of Best Management Practices, USFS BMP Handbook) demonstrated that the use of these BMPs have been able to maintain surface water quality conditions in adjacent receiving waters. If needed, a Dewatering Plan will be developed, and implemented if groundwater is encountered, to protect groundwater during excavations from potential sediment and contaminant releases, including methods to clean up releases if they do occur. The plan would include methods for controlling potentially sediment-laden water from dewatering activities.

3.7.3.4 Impervious Surface Area Runoff

Rates and volumes of runoff are affected by development through multiple mechanisms, but the most important of these are: (1) the conversion of vegetated or pervious surfaces to impervious surfaces; and (2) the development of drainage systems that connect these impervious surfaces to streams and other water bodies, thus increasing the rate of runoff and eliminating storage and infiltration that would otherwise occur along natural drainage paths. As water runs off the land surface, it collects and carries material that accumulates on the land surface. If the entrained material has potentially harmful effects on receiving waters downstream (e.g., fine sediment particles in Lake Tahoe), the material is defined as a stormwater pollutant. Additionally, runoff from impervious surfaces can become concentrated, causing land surface erosion and subsequent sediment transport into streams and Lake Tahoe.

The Proposed Project Alternative would result in the addition of 26,136 square foot (0.6 acre) of impervious pavement, see Table 3.6-2 in Section 3.6 Earth Resources, that could alter runoff

patterns. Permanent BMPs would be included for the project that will minimize soil erosion, include BMPs adequate to meet applicable water quality standards, incorporate adequate maintenance activities, and be subject to review and approval by TRPA, NDEP, and Douglas County. Because the Proposed Project Alternative would meet all regulatory requirements for controlling runoff as required by TRPA, the effects related to impervious surfaces and associated runoff would not result in significant short-term or long-term adverse effects on hydrology or water quality. To the extent that any factors (e.g., physical, technical, etc.) which are currently unknown later result in the modification of the proposed project as it is transformed from a preliminary engineering design, to a constructed permanent BMP plan for the project, the permanent BMPs for the project would be revised as necessary and would still be required to meet or exceed all LTBMU, NDEP, TRPA and Douglas County standards that apply to the project.

On relatively flat existing side slopes (less than 20 percent), stormwater from the US 50 and new access road would runoff as sheet flow onto the adjacent downstream pervious area and naturally infiltrate. Soils within the project area have been mapped by the NRCS (2006) to be somewhat excessively well drained, exhibiting high rates of measured saturated hydraulic conductivity. On moderately steep to steep side slopes (greater than 20 percent), stormwater from the US 50 corridor will sheet flow into one of four existing drop inlets and dissipate at riprap aprons at culvert outlets. Of the four existing drop inlets, one will be replaced as it conflicts with the proposed road widening along US 50. This inlet replacement will include a 2-foot sump within the structure to collect sediment prior to discharge. Stormwater runoff from the new access road will also sheet flow into the adjacent forested areas, where it will infiltrate into the excessively drained soils in the area.

3.7.3.5 Interception of Groundwater During Construction

Section 33.3 of the TRPA Code prohibits excavations, except under certain defined and permitted conditions, that interfere with or intercept the seasonal high water table by altering the direction of groundwater flow, altering the rate of flow of groundwater, intercepting groundwater, adding or withdrawing groundwater, or raising or lowering the water table. Construction of the Proposed Project Alternative will primarily consist of fill areas with minimal excavation. The areas of excavation will be limited to the culvert replacement locations and removal of the bike path segment. The average depth of excavation will be between 1-5' deep and groundwater is not expected to be encountered. Construction of the Proposed Project Alternative would not result in adverse effects related to groundwater interception.

3.7.3.6 Source Water Quality

Projects within 600 feet of a drinking water source identified by TRPA require special consideration in accordance with TRPA's Initial Environmental Checklist. There are no groundwater wells located within 600 feet of the Proposed Project Alternative. As such, the Proposed Project Alternative would not result in a degradation to an existing source water supply.

3.7.3.7 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to hydrology and water quality. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure BMP-1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP).

Mitigation Measure BMP-2. Develop Permanent BMPs to control stormwater runoff and minimize erosion and the transport of sediment and other pollutants of concern to Lake Tahoe.

Mitigation Measure BMP-3. Provide mitigation for additional impervious pavement.

3.7.4 Consequences for TRPA Environmental Threshold Carrying Capacities

This section summarizes the effects of implementing the Proposed Project Alternative on the environmental thresholds established by TRPA for water quality. The following Indicator Reporting Categories have been established by TRPA:

- Pelagic Lake Tahoe (deep waters),
- Littoral Lake Tahoe,
- Tributaries,
- Surface Runoff,
- Groundwater, and
- Other Lakes.

Pelagic Lake Tahoe and Littoral Lake Tahoe

The Pelagic Lake Tahoe and Littoral Lake Tahoe Threshold Indicator Reporting Categories include numerical standards that pertain to the quality and clarity of Lake Tahoe's waters, where measurements of the numerical standards are influenced by the amount of pollutant loading discharged to Lake Tahoe. According to the 2015 Threshold Evaluation (TRPA 2015), the status of the three water quality thresholds is the following:

- Nearshore Turbidity (Littoral Lake Tahoe): Status = At or somewhat better than target; Trend = Unknown;
- Nearshore Attached Algae (Littoral Lake Tahoe): Status = Unknown; Trend = Unknown, not assessed in 2011;
- Invasive Species (Littoral Lake Tahoe): Status = Unknown; Trend = Unknown, not assessed in 2011;
- Secchi Depth (Pelagic Lake Tahoe): Status = Somewhat worse than target; Trend = No change
- Clarity - Vertical Extinction Coefficient (Pelagic Lake Tahoe): Status = At or somewhat better than target; Trend = No change, not assessed in 2011.
- Phytoplankton Productivity (Pelagic Lake Tahoe): Status = Considerably below target; Trend = Rapid decline.

The Proposed Project Alternative would implement a SWPPP and permanent BMPs. The collective set of water quality protection measures and BMPs implemented through the Plans would: (1) demonstrate that erosion would be minimized; (2) include BMPs adequate to meet applicable water quality standards; (3) incorporate adequate maintenance activities; and (4) be subject to review and approval by TRPA, NDEP, and Douglas County. Therefore, the Proposed Project Alternative would not contribute to the nonattainment of the Pelagic Lake Tahoe and Littoral Lake Tahoe Threshold Indicator Reporting Categories.

Tributaries

The Tributaries Threshold Indicator Reporting Category includes indicators that have been interpreted to include Nevada nutrient standards for nitrogen and phosphorus in streams, as well as fine sediment and suspended sediment loads. The 2015 Threshold Evaluation (TRPA 2015) identifies the status for these threshold indicator reporting category as "unknown" status with "little or no change" or "moderate improvement" trends.

There are no tributaries located within the project area that could be impacted as part of the Proposed Project Alternative. Therefore, implementation of the Proposed Project Alternative would not contribute to the nonattainment of this threshold.

Surface Runoff and Groundwater

The Surface Runoff and Groundwater Threshold Indicator Reporting Categories include numerical standards for specific water quality constituents that set maximum allowable concentrations for discharges to surface water or infiltration into soils. According to the 2015 Threshold Evaluation (TRPA 2015), the status for these water quality thresholds consist of the following:

- Surface Runoff: Status = Unknown; Trend = Unknown; and
- Groundwater: Status = Unknown; Trend = Unknown.

The concentrations of pollutants in stormwater runoff discharged to surface waters or infiltrated in soils would be minimized by temporary and permanent BMPs within the project area, as depicted in the SWPPP and Permanent BMP Plans. Implementation of the Proposed Project Alternative would not result in a significant contribution to the nonattainment of these thresholds.

Other Lakes

The Other Lakes Threshold Indicator Reporting Category includes numerical standards for specific water quality constituents that set maximum allowable concentrations for lakes in the Region other than Lake Tahoe. The 2015 Threshold Evaluation (TRPA 2015) identifies the status for this threshold as “unknown” with a trend that is also “unknown.” The project area is located along US 50 at the Round Hill Pines Resort area, which is adjacent to the east shore of Lake Tahoe. The Proposed Project Alternative would not affect other lakes within the Tahoe Region and therefore would not affect this water quality threshold.

3.8 Recreation and Visitor Experience

This section evaluates the potential environmental effects associated with implementation of the Proposed Project Alternative to public parks, recreation, and open space recreational resources in and near the Project area.

3.8.1 Regulatory Setting

3.8.1.1 Lake Tahoe Basin Land Management Plan

The Land Management Plan for the Lake Tahoe Basin Management Unit guides the management of the land in order to promote a sustainable flow of uses, benefits, products, services, and visitor opportunities (USDA 2016). The plan provides a framework for informed decision making, while guiding resource management programs, practices, uses, and projects. The Forest Plan identifies a recreation program strategy to provide for a range of recreation opportunities while emphasizing shared use and sustainability objectives. The Forest Plan also identifies controlled expansion strategies to provide future recreation opportunities. Recreation expansion is an increase of infrastructure in support of additional recreation opportunities over the LTBMU landscape and can be defined as the addition of new infrastructure to accommodate recreation activities.

3.8.1.2 Tahoe Regional Planning Agency

Based on TRPA's Initial Environmental Checklist, effects related to recreation were also evaluated based on whether the Proposed Project Alternative would:

- Create substantial, unmet additional demand for recreation facilities;
- Result in conflicts between recreational uses, either existing or proposed;
- Result in a decrease or loss of public access to any lake, waterway, or public lands; or
- Result in a reduction of public access to public recreation areas or public recreation opportunities.
- Result in changes in situation, deposition, or erosion that could modify the channel of a river or stream or the bed of a lake;
- Result in unstable soil conditions during or after completion of the project; or
- Expose people or property to geologic hazards such as earthquakes, landslides, avalanches, or similar hazards.

TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances for were used to analyze potential effects from the Proposed Project Alternative on recreational resources.

3.8.2 Affected Environment

Recreational opportunities in the Lake Tahoe Basin are abundant and diverse, with activities generally associated with Lake Tahoe's open water (e.g., swimming, motorized and non-motorized boating, personal watercraft use, and fishing), shoreline (e.g., sunbathing, beach play, picnicking, camping, bicycling, and sightseeing), and the terrain surrounding the lake (e.g., hiking, mountain biking, snowshoeing, skiing, and snowboarding). The following describes existing recreation sites within the project area and in the project vicinity. Information on existing facilities, capacity, and current usage at each recreation site is summarized below.

Round Hill Pines Beach and Marina Resort

Round Hill Pines Beach and Marina is located within the project area along US 50, on the east shore of Lake Tahoe. It is located on NFS land managed by the LTBMU but the resort and marina facilities are operated by a concessionaire through a special use permit from the LTBMU. Round Hill Pines Beach is considered a major destination at the southern end of Marla Bay and is open seasonally from May through September, weather dependent.

Round Hill Pines Resort provides the following recreational facilities:

- The Main Beach is a narrow (75 to 100-foot wide) 1000-foot long stretch of sandy beach along the east shore of Lake Tahoe. Two paved concrete parking areas serve the resort area. Two additional asphalt parking areas will be added in Summer 2021. The resort is open for May to September from 8:00am to sunset.
- Day use activities offered along the beach include swimming, beach volleyball, and general recreation along the beach.
- The Round Hill Pines Marina offers watercraft mooring, boat access at the pier, boat, jet-ski, kayak, and stand up paddleboard rentals. Daily cruises along Lake Tahoe are also offered by the Tahoe Serenity, which is docked at the marina.
- A newly renovated restaurant and restrooms are located at the edge of the beach near the pier.

Visitors are charged a fee for on-site parking. Currently, the South Demonstration Bike Trail enters the Round Hill Pines Resort area from the south and terminates at US 50. The restaurant and restroom facilities were recently improved by the LTBMU in partnership with the concessionaire. Parking is available at the Round Hill Pines Resort and currently has 83 formal designated parking spaces. The Round Hill Pines Resort Improvement Project (Phase 2) will improve traffic flow and consolidate informal parking on the resort into 112 formal parking spaces. This project will be conducted by LTBMU in partnership with the concessionaire and is currently in the final design phase. This project is separate from the Round Hill Pines Access project and construction is anticipated to begin in 2021.

Existing Bicycle and Pedestrian Trails

U.S. Highway 50 provides the primary access to the project area and is classified as a shared use path for bicycles and pedestrians. Currently, there is no designated bike lane and cyclists use the shoulder when available (NDOT 2014).

Additional existing shared-use paths located within the project area are described below.

Stateline to Stateline Trail, South Demonstration Segment

The Stateline-to-Stateline Trail (South Demonstration Segment) is located on the east shore of Lake Tahoe beginning at Laura Drive and ending on the Round Hill Pines Resort property at US 50. The segment is approximately 2.2 miles in length and includes a 10-foot wide paved path with 2-foot wide shoulders on both sides. This segment is a component of the larger Nevada Stateline to Stateline Bikeway and overall regional shared-use path network.

Dispersed Lake Access Points and Trails

Several paved trails and informal footpaths are located within the Round Hill Pines Resort, most of which are not officially designated as trails by LTBMU. These trails and trail networks provide access to parking areas, beach areas, and other recreation destinations located at Round Hill Pines Resort.

3.8.3 Environmental Consequences and Mitigation Measures

Significance Criteria

Based on the TRPA Initial Environmental Checklist, a project would result in a significant adverse effect on recreation if it would:

- result in a decrease or loss of public access to any lake, waterway, or public lands;
- result in a reduction of public access to public recreation areas or public recreation opportunities;
- create substantial, unmet additional demand for recreation facilities; or
- result in conflicts between recreation uses, either existing or proposed.

The effects of the project on TRPA recreation thresholds (“Quality Experience and Additional Access” and “Fair Share of Resource Capacity”) are discussed separately at the end of this section. Because the proposed project would provide improvements to an existing recreational facility and has been designed to specifically meet the demand for high-quality, outdoor recreation opportunities in the Tahoe Basin, the “unmet additional demand” significance criterion is not discussed further in this document.

3.8.3.2 No Action Alternative

Under the No Action Alternative, the Round Hill Pines Access project would not be constructed. Therefore, the inventory of existing recreation facilities would remain unchanged from existing conditions.

3.8.3.3 Proposed Project Alternative

Increased Public Access and Recreational Opportunities

Implementation of the Proposed Project Alternative would not reduce public access and recreation opportunities. Relocation of the Round Hill Pines Resort access road would maintain access to recreation, as well as potentially increasing access for larger vehicles such as RVs, transit busses.

As part of the Proposed Project Alternative, a 549-foot long portion of the Stateline-to-Stateline Bike trail would be removed due to construction of the new access road and would not be replaced. The Stateline-to-Stateline Bike trail would terminate at an existing paved path that leads to the Round Hill Pines public beach area. LTBMU, TRPA, and Douglas County support removing this short segment of trail because it terminates at US 50 in an undesirable location and does not continue further along the east shore of Lake Tahoe. During several site visits in 2019, trail users were observed directly turning around at the US 50 terminus, instead of crossing the roadway. LTBMU, TRPA, and Douglas County have stated that a future Stateline-to-Stateline Bike trail project is in the planning stages and this future project would provide trail users with a safer US 50 crossing location. Recreational trail users would still be able to access the Round Hill Pines Resort from the Stateline-to-Stateline bike trail; therefore, the loss of a 549-foot segment of trail would not be a significant impact.

The Proposed Project Alternative would provide a new access road into the Round Hill Pines Resort while protecting and enhancing the quality, integrity, and character of existing recreation opportunities. The Proposed Project Alternative would support the recommendations of the LTBMU, the TRPA’s Goals and Policies from the Recreation Element related to increased recreational access, as well as support the goals of the TRPA Regional Plan and Tahoe Transportation District. Therefore, Proposed Project Alternative would result in a beneficial effect related to increased recreational opportunities.

Increase in Demand For and Use of Existing Recreation Facilities

Implementation of the Proposed Project Alternative not would result in changes to public access within the study area. The access point would be relocated further to the north along US 50, but the proposed project would maintain the public access at the Round Hill Pines Resort that exists today. The Proposed Project Alternative would restrict public access to the existing access road into the Round Hill Pines Resort. As previously stated, a 549-foot long segment of the Stateline-to-Stateline trail will be removed as part of the proposed project. This segment currently ends at US 50 and does not continue further to the north. Recreational trail users would no longer have access to this short segment of the trail; however, a future Stateline-to-Stateline trail project is currently in the planning phases and would begin at Round Hill Pines Resort and continue to the north along the east coast of Lake Tahoe (Mitigation Measure REC-1). In conclusion, the Proposed Project Alternative would not result in an increase in demand for and use of existing recreation facilities.

Conflicts with Existing or Proposed Recreation Uses

The Proposed Action Alternative would not result in substantial conflicts with any existing or planned recreation facilities nor any known planned bicycle/pedestrian trails, including those identified in the 2020 TRPA Regional Transportation Plan. The plan envisions the US 50 East Shore Corridor would provide safe on- and off-street transportation with connected pedestrian and bicycle paths, transit service, sustainable recreation access, and connectivity to the many neighborhoods and businesses from within the Region and from neighboring regions. The intersection improvements at Round Hill Pines Resort are included in the plan; therefore, the Proposed Project Alternative would not result in a substantial conflict with existing or proposed recreation uses.

3.8.3.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to recreation. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure REC-1. Use signage and/or additional public information methods to notify Stateline-to-Stateline trail users that access will be temporarily modified during construction.

3.8.4 Consequences for TRPA Environmental Threshold Carrying Capacities

This section summarizes the effects of implementing the Proposed Project Alternative on the environmental thresholds established by TRPA for recreation. The following Indicator Reporting Categories have been established by TRPA:

- **Quality of Recreation Experience and Access to Recreational Opportunities:** “It shall be the policy of the TRPA Governing Body in development of the Regional Plan to preserve and enhance the high quality recreational experience including preservation of high-quality undeveloped shore zone and other natural areas. In developing the Regional Plan, the staff and Governing Body shall consider provisions for additional access, where lawful and feasible, to the shore zone and high-quality undeveloped areas for low density recreational uses.”
- **Fair Share Distribution of Recreation Capacity:** “It shall be the policy of the TRPA Governing Body in development of the Regional Plan to establish and ensure a fair share of the total Basin capacity for outdoor recreation is available to the general public.”

Adopted threshold standards for recreation are statements of policy, rather than a numerical standard. These adopted threshold standards direct TRPA to adopt policies that would preserve and enhance high-quality recreational experiences, and provide additional access to the shore

zone and other areas for dispersed recreational uses. These threshold standards also direct TRPA to "...establish and ensure a fair share of the total basin capacity for outdoor recreation is available to the general public." The goal of the Recreation element of the Regional Plan is to promote and manage recreational improvements to achieve these recreation threshold standards, and "ensure equilibrium between the region's natural endowment and its manmade environment."

Quality of Recreation Experience and Access to Recreational Opportunities

The Round Hill Pines Access Project would improve vehicular and pedestrian access to the resort area and various recreation opportunities located at the resort. In addition, the project would support Douglas County's Recreation Goals and Policies, TRPA's Goals and Policies from the Recreation Element related to increased recreational access. The Proposed Action Alternative would contribute positively towards attainment of TRPA's Recreation Threshold Indicator, which is currently in attainment.

Fair Share Distribution of Recreation Capacity

The Round Hill Pines Access Project would enhance outdoor recreation opportunities available to the general public. Therefore, the Proposed Project Alternative would contribute positively towards attainment of TRPA's Recreation Threshold Indicator, which is currently in attainment.

3.9 Transportation

This section describes the potential impacts to transportation and traffic on and around the Project corridor that might be expected from implementation of the Proposed Project Alternative. The analysis in this section relies on the following: traffic engineering guidelines, supporting technical memorandums prepared by FHWA-CFLHD and sight distance guidelines specified in American Association of State Highway and Transportation Officials' (AASHTO's) A Policy on Geometric Design of Highways and Streets (AASHTO 2018).

3.9.1 Regulatory Setting

3.9.1.1 Tahoe Regional Planning Agency

Based on TRPA's Initial Environmental Checklist, effects related to traffic, parking, and transit were evaluated based on whether an alternative would:

- Generate an increase in Daily Vehicle Trip Ends and related Vehicle Miles Traveled (VMT) not contemplated in the Regional Transportation Plan;
- Create an unmet demand for parking;
- Cause a substantial adverse effect upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities;
- Alter present patterns of circulation or movement of people and/or goods; or increase traffic hazards to motor vehicles, bicyclists, or pedestrians.

An environmental document prepared to comply with NEPA must consider the context and intensity of the environmental effects that would be caused by or result from the proposed action. The factors that are taken into account under NEPA to determine the significance of an action in terms of the context and the intensity of its effects are encompassed by the TRPA criteria used for this analysis.

3.9.1.2 Nevada Department of Transportation

Nevada Department of Transportation (NDOT) is responsible for the operation and maintenance of the state highway system in Nevada. NDOT has a right-of-way corridor approximately 80-feet wide along this segment of US 50 within the project area and actively maintains the corridor. The US 50 access road to the Round Hill Pines Resort and additional distributor roads located on the property are owned and operated by the LTBMU and the concessionaire.

3.9.2 Affected Environment

3.9.2.1 Study Area Roadways

This section identifies the existing transportation facilities and describes traffic conditions for the roadway network within the vicinity of the proposed project.

- **U.S. Highway 50** is functionally classified as a Principal Arterial with a primary function of delivering traffic from collector roads to freeways or expressways between urban centers. In 2016, the ADT along U.S. 50 within the study area is estimated at 20,000 vehicles with projected 2036 traffic volumes of 25,641 vehicles (NDOT Road Safety Audit, 2016). The roadway consists of two travel lanes in each direction with a posted speed limit within the study area of 45 mph. In addition to passenger cars, larger vehicles hauling boats, trailers, freight trucks, and other recreation vehicles such as campers, frequently utilize the U.S. 50 corridor to access commercial, residential, or recreation areas. U.S. 50 is classified as a shared use path for bicycles and pedestrians, however there is no designated bike lane (NDOT 2014).
- **Round Hill Pines Resort access road** is designated as Forest Service Road 1339, which is open to highway legal vehicles only during the seasonal designation of May through

October. The roadway consists of one travel lane in each direction with a speed limit of 20 mph.

- **Sierra Sunset Lane** is a private drive that provides access to private property.

3.9.2.2 Intersection Configuration

The following is a description of the intersections included in the analysis:

- The **U.S. 50/Round Hill Pines Access** road intersection is an unsignalized intersection with no posted traffic control. Currently, there are no turn lanes provided along US 50.
- The **U.S. 50/Sierra Sunset Lane** intersection is an unsignalized intersection with no posted traffic control. Currently, there are no turn lanes provided along US 50.

3.9.2.3 Ground Transit Services and Facilities

The East side of Lake Tahoe (including both California and Nevada portions) is primarily served by the Tahoe Transportation District (TTD). Currently, no transit service offers stops at the Round Hill Pines Resort. The following route provides transit service along US 50 within the project area:

- East Shore Express Route 28 Sand Harbor Shuttle is operated by the Tahoe Transportation District and provides access to Sand Harbor. Transit users can park at the main parking area located at Incline Village, NV or the Kingsbury Transit Center in Stateline, NV. This service runs every 20 minutes from 10:00am to 7:00pm beginning weekends in June and daily from June 29th through Labor Day weekend.

3.9.2.4 Pedestrian and Bicycle Facilities

The Stateline-to-Stateline Trail (South Demonstration Segment) is located on the east shore of Lake Tahoe beginning at Kahle Drive and ending on the Round Hill Pines Resort property at US 50. The segment is approximately 2.2 miles in length and includes a 10-foot wide paved path with 2-foot wide shoulders on both sides. This segment is a component of the larger Nevada Stateline to Stateline Bikeway and overall regional shared-use path network. Several paved trails and informal footpaths are located within the project area, most of which are not officially designated as trails by LTBMU. These trails and trail networks provide access to parking areas, beach areas, and other recreation destinations located at Round Hill Pines Resort.

U.S. 50 is classified as a shared use path for bicycles and pedestrians. Currently, there is no designated bike lane and cyclists use the shoulder when available (NDOT, 2014).

3.9.2.5 Parking Facilities

Parking in the vicinity of the proposed Round Hill Pines Access Project is available at the following locations:

- Round Hill Pines Resort has 83 formal designated parking spaces and approximately 200 informal parking spaces. The Round Hill Pines Resort Improvement Project (Phase 2) will consolidate informal parking on the resort into 112 formal parking spaces by the end of 2021.
- Limited shoulder parking is available along US 50 near the Round Hill Pines Resort existing access road.

3.9.2.6 Roadway Traffic Volumes

The existing peak hour and Average Daily Traffic (ADT) volumes for US 50 are presented below in Table 3.9-1.

Table 3.9-1: Existing Average Daily Traffic Volumes

Roadway	Average Daily Traffic Volumes
US 50, 50ft east of Yan Road	14,100
US 50, 220ft west of Sierra Sunset Lane	19,800
US 50, 530ft north of Kahle Drive	22,000
Source: NDOT 2019	

Traffic counts for the existing Round Hill Pines access road were provided in the FLAP application, with an estimated ADT of 1,000. Based on the existing parking availability and accounting for the seasonal closure of the Round Hill Pines Resort, an estimated ADT of 1,2000 was established for project design and the signal warrant analysis (Appendix A).

3.9.3 Environmental Consequences and Mitigation Measures

Significance Criteria

Based on TRPA's Initial Environmental Checklist, effects related to transportation were evaluated based on whether an alternative would:

- generate an increase in Daily Vehicle Trip Ends and related Vehicle Miles Traveled (VMT) not contemplated in the Regional Transportation Plan;
- create an unmet demand for parking;
- cause a substantial adverse effect upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities;
- alter present patterns of circulation or movement of people and/or goods; or increase traffic hazards to motor vehicles, bicyclists, or pedestrians.

An environmental document prepared to comply with NEPA must consider the context and intensity of the environmental effects that would be caused by or result from the proposed action. The factors that are taken into account under NEPA to determine the significance of an action in terms of the context and the intensity of its effects are encompassed by the TRPA criteria used for this analysis.

3.9.3.2 No Action Alternative

Under the No Action Alternative, no changes to the existing Round Hill Pines Resort access road, no relocation of the Round Hill Pines Resort access road intersection with US 50, and no widening along US 50 to accommodate a median turn lane and acceleration lane would occur. The existing access road would continue to be narrow, with sharp curves and poor pavement conditions. Large vehicles, such as boat trailers and commercial trucks transporting goods to the Round Hill Pines Resort, would continue to occupy both travel lanes, particularly where the road is narrow and curves are sharp. The existing entrance to the Round Hill Pines Resort from US 50 would continue to have safety concerns due to poor sight distance. No median turn lane would be added to US 50 and visitors to the Round Hill Pines Resort would continue to utilize the existing access road intersection.

3.9.3.3 Proposed Project Alternative

Traffic

The Round Hill Pines Access Project did not evaluate if the existing and projected traffic volumes in the study area warrant capacity improvements. The proposed access improvements to the Round Hill Pines Resort would not change the capacity of US 50. Construction activities to implement the Proposed Project Alternative would temporarily impact access to Round Hill Pines Resort and traffic during weekdays. The project may create temporary traffic lines and congestion, which would be particularly intensified during peak visitation during the summer holidays.

Safety

The Federal Highway Administration, Central Federal Lands Highway Division prepared a Safety Analysis Memo to discuss the existing safety conditions and the anticipated safety improvements achieved by the project. The existing intersection was analyzed for left turn intersection sight distance. Based on existing conditions, the required sight distance is 588-feet for passenger vehicles. For vehicles turning left onto US 50 from the existing entrance road, the existing sight distance to the north is approximately 760-feet; however, the existing sight distance is only 310-feet to the south due to the location of a vertical curve. This results in the existing intersection configuration with insufficient sight distance to the south.

The Proposed Project Alternative would improve safety by relocating the US 50 and Round Hill Pines Access Road further to the north to improve sight distance. The proposed location for the relocated intersection was selected to maximize sight distance. By relocating the entrance road, an increased sight distance of approximately 665-feet is achieved in both directions, which is sufficient for passenger vehicles (CFLHD 2020).

The Safety Analysis Memo also applied the Interactive Highway Safety Design Model (IHSDM), which is a software analysis tool used to evaluate the safety and operational effects of geometric design decisions on highways. The software allows the user to import roadway geometry and assign attributes (such as lane widths, traffic data, turn lanes, etc.) for analysis. With this information, the software applies crash reduction factors (CRFs) and predicts total number and types of crashes for a specified time range. The IHSDM results show a significant reduction in crashes (11.5% total crash reduction) by adding a left turn lane along US 50 for Round Hill Pines Resort visitors.

Existing pavement widths along the Round Hill Pines Resort access road varies between 12-feet and 18-feet wide, with a hairpin turn and steep grades leading down to the parking areas and beach access. The existing roadway has no shoulders or lane markings. The Proposed Project Alternative would widen the access road for two 12-foot wide lanes with 2-foot shoulders and 1:4 shoulders. This would improve conditions for passenger vehicles, large trucks with trailers, recreational vehicles, and shuttle buses. The paved shoulders would also improve the safety for bicyclists by providing some degree of separation from vehicles. Safety would be improved not only for drivers and passengers of these vehicles, but for other travelers and cyclists sharing the road with these large vehicles.

Conclusion

Based on the information above, the Proposed Project Alternative would not result in a significant increase in VMT not assumed in the Regional Transportation Plan. The project would not introduce new traffic patterns or new destinations along US 50 or within Douglas County. The project would not create an unmet demand for parking within the project area. The project would not cause a substantial adverse effect upon the existing transportation system or alter existing traffic patterns, or increase traffic hazards.

3.10 Noise

This section includes a description of acoustic fundamentals, existing ambient noise conditions, and an analysis of potential short- and long-term noise effects associated with implementation of the Round Hill Pines Access Project. Potential effects of the Proposed Project Alternative on wildlife are addressed in Section 3.4 Biological Resources.

3.10.1 Regulatory Setting

Acoustic fundamentals will be defined below to gain context and understanding into the regulatory setting. Key federal, state and local regulatory and conservation planning issues applicable to the project for noise-related impacts are also discussed below.

Acoustic Fundamentals

Acoustics is the scientific study that evaluates perception and properties of sound waves. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Common sources of environmental noise and associated noise levels are presented in Table 3.10-1.

Table 3.10-1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 feet	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, Dishwasher in next room
Quiet urban nighttime	40	Theater, Large Conference Room
Quiet suburban nighttime	30	Library, Bedroom at night, Concert hall
Quiet rural nighttime	20	Broadcast/Recording Studio
Threshold of Human Hearing	0	Threshold of Human Hearing
Source: Federal Transit Administration (FTA) 2006: 2-16		

Sound Properties

Sound levels are measured using the decibel (dB) scale, developed to relate to the range of human hearing. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed, identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels. For this reason, the A-weighted sound levels are used to predict community response to noise from the environment, including noise from transportation and stationary sources, and are expressed as A-weighted

decibels (dBA). All sound levels discussed in this section are A-weighted decibels unless otherwise noted.

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes and stationary sources such as activity at construction sites, machinery, and commercial and industrial operations. As sounds travel through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers. Noise generated from mobile sources generally attenuate at a rate of 4.5 dB per doubling of distance from the source. Noise from stationary sources spread with more spherical dispersion patterns that attenuate at a rate of 6 to 7.5 dB per doubling of distance from the source.

Atmospheric conditions such as wind speed, wind direction, turbulence, temperature gradients, and humidity also alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a barrier (e.g., topographic feature, intervening building, and dense vegetation) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. Both natural (e.g., berms, hills, and dense vegetation) and human-made features (e.g., buildings and walls) may function as noise barriers.

Common Noise Descriptors

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels are used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to characterize environmental noise are defined below (FTA 2006: p. 2-25).

- **Equivalent Noise Level (Leq):** The average noise level during a specified time period; that is, the equivalent steady-state noise level in a stated period of time that would contain the same acoustic energy as the time varying noise level during the same period (i.e., average noise level).
- **Maximum Noise Level (Lmax):** The highest instantaneous noise level during a specified time period.
- **Minimum Noise Level (Lmin):** The lowest instantaneous noise level during a specified time period.
- **Day-Night Noise Level (Ldn):** The 24-hour Leq with a 10-dB penalty applied during the noise-sensitive hours from 10:00 p.m. to 7:00 a.m., which are typically reserved for sleeping.
- **Community Noise Equivalent Level (CNEL):** Similar to the Ldn described above with an additional 5-dB penalty applied during the noise-sensitive hours from 7:00 p.m. to 10:00 p.m., which are typically reserved for evening relaxation activities.
- **Single Event Noise Levels (SEL):** Sounds that occur in an irregular or non-repetitive manner, which makes them difficult to anticipate; these are usually measured by Lmax noise levels.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. The Leq, or average noise level over a given period of time, is the foundation of composite noise descriptors such as Ldn and CNEL, which effectively indicate community response to ambient noise levels.

Effects of Noise On Humans

Excessive and chronic (long-term) exposure to elevated noise levels can result in auditory and non-auditory effects on humans. Auditory effects of noise on people are those related to

temporary or permanent hearing loss caused by loud noises. Non-auditory effects of exposure to elevated noise levels are those related to behavior and physiology. The non-auditory behavioral effects of noise on humans are primarily subjective effects such as annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep, and learning. The non-auditory physiological health effects of noise on humans have been the subject of considerable research into possible correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. The mass of research implies that noise-related health issues are predominantly the result of behavioral stressors and not a direct noise-induced response. The extent to which noise contributes to non-auditory health effects remains a subject of considerable research, with no definitive conclusions.

Negative effects of noise exposure include physical damage to the human auditory system, interference with daily activities, sleep disturbance, and disease. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period. Gradual and traumatic hearing loss both may be permanent. In addition, noise may interfere with or interrupt sleep, relaxation, recreation, and communication.

Although most interference may be classified as annoying, the inability to hear a warning signal (for example) may be considered dangerous. Noise may also be a contributor to diseases associated with stress, such as hypertension, anxiety, and heart disease. The degree to which noise contributes to such diseases depends on the frequency, bandwidth, and level of the noise and the exposure time (EPA 1974).

Ground Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of ground vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, and landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, and construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root mean square (RMS) vibration velocity. Peak particle velocity is defined as the maximum instantaneous positive or negative peak of a vibration signal. Peak particle velocity is typically used in the monitoring of transient and impact vibration and has been found to correlate well with the stresses experienced by buildings (FTA 2006: p.7-3). PPV and RMS vibration velocity are normally described in inches per second (in/sec).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2006: p.7-3). This is based on a reference value of 1 micro (μ) in/sec. The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2006).

3.10.1.2 Federal Highway Traffic Noise Regulation (23 CFR Part 772)

Under 23 CFR Sec. 772.7, projects are categorized as Type 1, Type 2, or Type 3 projects. FHWA defines a Type 1 project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway where there is either substantial horizontal or substantial vertical alteration, or increases the number of through-traffic lanes. A Type 2 project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type 3 project is a project that does not meet the classifications of a Type 1 or Type 2 project. Type 3 projects do not require a noise analysis. Type 1 projects include the addition of through traffic lanes that function as high-occupancy vehicle lanes, high-occupancy toll lanes, bus lanes, or truck climbing lanes. Type 1 projects include the addition of an auxiliary lane (except when an auxiliary lane is a turn lane); addition or relocation of interchange lanes or ramps; restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane; and the addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza. Projects unrelated to increased noise levels, such as striping, lighting, signing, and landscaping projects, are not considered Type 1 projects. The Proposed Project includes construction of an access road in a new location and substantial horizontal alteration; therefore, the Round Hill Pines Access Project is categorized as a Type 1 Project according to 23 CFR 772.

Under 23 CFR 772.11, noise abatement must be considered for Type 1 projects if the project is predicted to result in a traffic noise impact. In such cases, 23 CFR 772 requires that the project sponsor “consider” noise abatement before adoption of the final NEPA document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project, and of noise impacts for which no apparent solution is available. Traffic noise impacts, as defined in 23 CFR 772.5, occur when the predicted noise level in the design year approaches or exceeds the NAC specified in 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (i.e., a “substantial” noise increase).

3.10.1.3 Tahoe Regional Planning Agency

Based on TRPA’s Initial Environmental Checklist, effects related to noise were evaluated based on the Proposed Project Alternative would result in:

- Increased in existing Community Noise Equivalency Levels (CNEL) beyond those permitted in the applicable Plan Area Statement, Community Plan or Master Plan;
- Exposure of people to severe noise levels;
- Single event noise levels greater than those set forth in the TRPA Noise Environmental Threshold;
- The placement of residential or tourist accommodation uses in areas where the existing CNEL exceeds 60dBA or is otherwise incompatible;
- The placement of uses that would generate an incompatible noise level in close proximity to existing residential or tourist accommodation uses;
- Exposure of existing structures to levels of ground vibration that could result in structural damage.

TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances were used to analyze potential effects from the Proposed Project Alternative on noise.

3.10.2 Affected Environment

Sensitive Land Uses

Noise-sensitive land uses generally include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern due to the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship, and other similar places where low interior noise levels are of great importance, are also considered noise-sensitive. Noise-sensitive land uses are also considered to be vibration sensitive. Specifically, commercial and industrial buildings where ground vibration (including vibration levels that may be well below those associated with human annoyance) could interfere with operations within the building would be most sensitive to ground vibration (e.g., hospitals, laboratories).

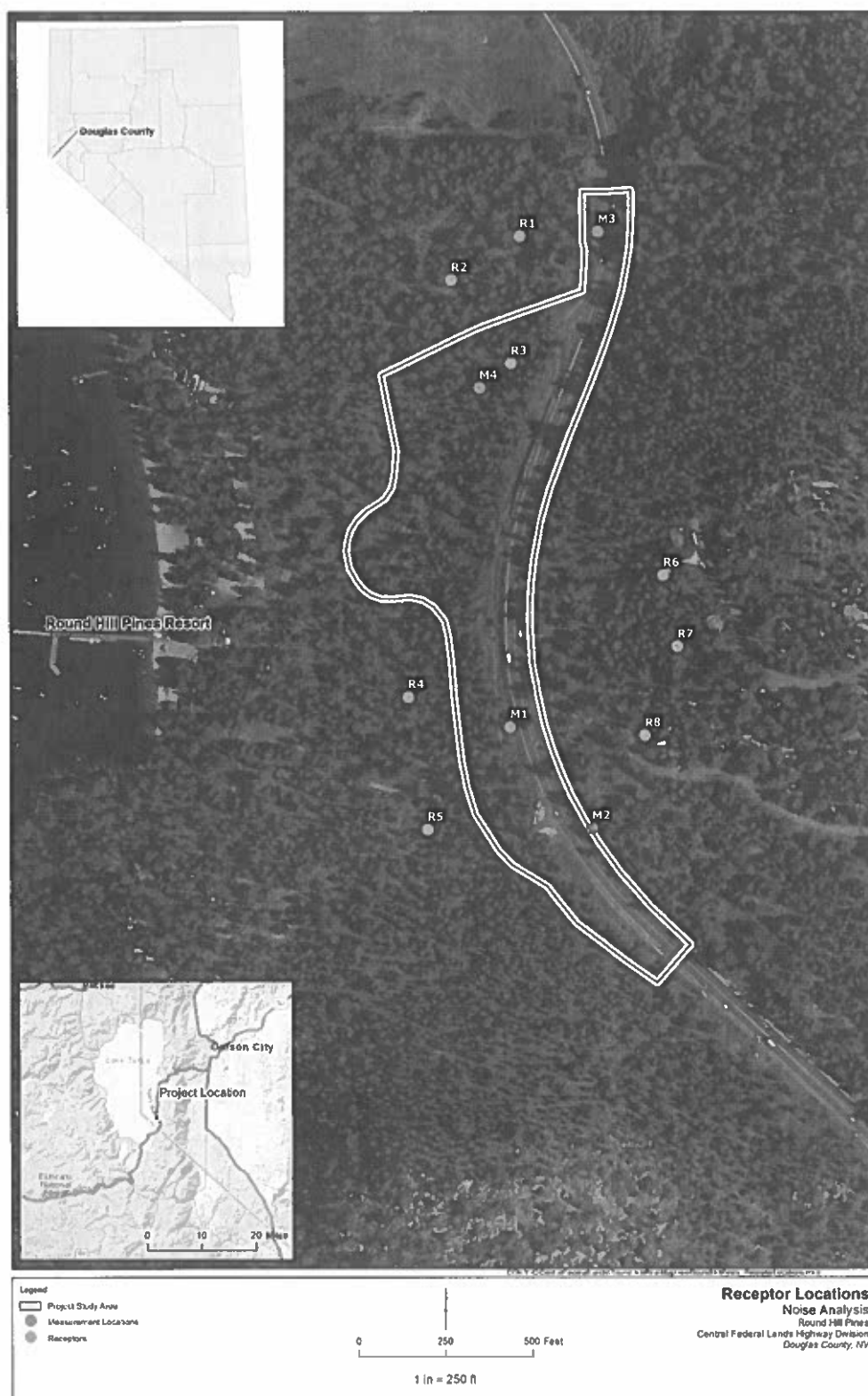
Sources and Ambient Levels

The noise study area is located along a segment of US 50 with scattered residential development and recreational use facilities associated with the Round Hill Pines Resort. Private residences are located along Sierra Sunset Lane and at Round Hill Village (east of US 50) between 250 and 400 feet from the nearest travel lane. The noise environment within the study area is predominately influenced by vehicular traffic along US 50 and visitors entering and exiting the Round Hill Pines Resort. Less pronounced noise sources in the area include recreational activities on the Round Hill Pines Resort (people talking and boat activities).

Existing traffic noise levels were modeled for US 50 within the study area in accordance with the FHWA's approved Traffic Noise Model (TNM) 2.5 as well as NDOT noise guidelines. Traffic noise modeling results are based on existing average daily traffic (ADT) volumes and speeds from NDOT (NDOT 2016). Modeling assumes no natural or human-made shielding. The extent to which land used are affected by existing traffic noise depends on their respective proximity to US 50 and sensitivity to noise.

On July 22, 2019, noise measurements were taken at four locations within the study area to determine ambient noise levels, see Figure 3.10-1 showing the locations of the field measurements. Short-term noise readings were collected for 15 minutes for each event as required by NDOT. Traffic counts, by vehicle type, were collected simultaneously with the noise measurements. Operating speeds and existing geometry were also collected and input into the FHWA-approved TNM 2.5 for validation, see Traffic Noise Study (Jacobs, 2021) in Appendix A.

Figure 3.10-1: Receptor Noise Locations



3.10.3 Environmental Consequences and Mitigation Measures

Significance Criteria

The project would result in a significant adverse noise effect if implementation of the project would result in any of the following:

Short-term construction-related noise levels that:

- exceed applicable noise standards established by TRPA during the more noise-sensitive early morning, evening, and nighttime periods of the day that are not exempt by TRPA (i.e., 8:00 a.m. to 6:30 p.m., daily [Section 68.9 of the TRPA Code]); and/or
- expose noise-sensitive receptors to noise levels that exceed applicable noise standards established by Douglas County during the more noise-sensitive periods of the day that are not exempt by Douglas County.
- New stationary or area sources that would generate long-term operational noise levels that exceed TRPA noise standards; or,

Long-term traffic noise levels that:

- exceed an Environmental Threshold Carrying Capacity noise standard established by TRPA for different land use categories and highway corridors (including the CNEL standards in relevant Community Plans and Plan Area Statements), or FHWA Noise Abatement Criteria defined in 23 CFR, Part 772;
- result in a long-term perceptible increase in the ambient noise level (i.e., 3-dBA or greater) in an area where the applicable TRPA Environmental Threshold Carrying Capacity noise standard is not exceeded;
- result in a long-term noise level increase, of any magnitude, in an area where the applicable TRPA Environmental Threshold Carrying Capacity noise standard is already exceeded.

Methods and Assumptions

To assess potential short-term and long-term noise effects, sensitive receptors and their relative exposure were identified. The methodology employed for this analysis is consistent with both FHWA and NDOT guidelines for analyzing traffic noise. FHWA's approved TNM 2.5 was used for this analysis. The basic inputs to noise modeling include roadway network layout, site characteristics, peak hour traffic volume projections, fleet mix, and vehicular operating speeds. Roadway and noise receiver geometry was based on an AutoCAD design file and aerial photography.

3.10.3.2 No Action Alternative

The No Action Alternative would not involve relocation of the Round Hill Pines Resort access road construction or improvement of the roadway. Noise levels in the study area are not anticipated to substantially change with ongoing maintenance activities described in Chapter 2. Therefore, noise impacts are not anticipated as a result of this alternative.

3.10.3.3 Proposed Project Alternative

Construction activities associated with the Proposed Project Alternative would generate noise from diesel-powered earth-moving equipment, such as dump trucks and bulldozers, back-up alarms on certain equipment, and compressors. Construction noises at off-site receptor locations would depend on the loudest piece of equipment operating at the moment. According to the FHWA Construction Noise Handbook (2006), noise levels from diesel-powered equipment range from 80 to 95 dBA at a distance of 50 feet. Impact equipment, such as pile drivers, can generate

louder noise levels. Construction activities would be temporary and would occur during normal daytime hours when occasional loud noises are more tolerable. None of the receptors are expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal daytime activities is not expected. Coordination will be conducted with local agencies to secure necessary construction permits which may include variances for any nighttime construction work and/or exceedance of any maximum thresholds specified in local ordinances.

Construction equipment use would be intermittent throughout the course of a normal work period. The entire construction period for the Proposed Project Alternative is anticipated to last approximately 6 months, although construction would be suspended as necessary during inclement weather. Construction activities would be temporary and would occur during weekday daytime hours only.

Trucks transporting materials and equipment to and from the project area would generate noise during construction. However, traffic associated with construction would not result in a noticeable increase in noise levels. As defined by FHWA, noise levels from an increase in traffic would only be perceptible to the human ear if there was an increase of greater than 3 dBA. Traffic trips associated with construction would be well below the amount required to double current traffic volumes. Therefore, the additional traffic associated with construction is not anticipated to result in a noticeable increase in noise levels in the study area.

Table 3.10-2 Modeled Noise Levels

Receiver No.	No. of Receiver by Activity	NAC (dBA)	Existing 2016 (dBA)	No-Build Alternative 2036 (dBA)	Build Alternative 2036 (dBA)*	Build increase over Existing	Noise Impact
R1	1	66.0/B	58	59	61	3	No
R2	1	66.0/B	54	55	57	3	No
R3	1	66.0/B	59	60	61	2	No
R4	1	66.0/B	54	55	55	1	No
R5	1	66.0/B	53	54	55	2	No
R6	3	66.0/B	56	57	59	3	No
R7	2	66.0/B	55	56	58	3	No
R8	2	66.0/B	58	59	61	3	No

Long term noise impacts were analyzed and are shown in Table 3.10-2. Based on the TNM, there are no impacts at any of the noise-sensitive receivers, which are set back between 175 and 475 feet from the road. The largest increase between the Existing and Proposed Project Alternative is less than 3dBA and would therefore not be a noticeable increase to the human ear. Additionally, the noise levels are below the CNEL limit of 65 dB for this plan area and, therefore, this Project is consistent with the TRPA noise limits.

3.10.3.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential noise impacts. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measures NOS-1. Implement noise controls on construction equipment.

Mitigation Measures NOS-2. Implement construction hour limits.

Mitigation Measures NOS-3. Consider equipment placement and operation during construction.

3.10.4 Consequences for TRPA Environmental Threshold Carrying Capacities

This section describes the effects of implementing the Proposed Project Alternative on the thresholds established for noise by TRPA. Two Indicator Reporting Categories for noise have been established by TRPA:

- Single Noise Events, and
- Cumulative Noise Events.

The 2015 TRPA Threshold Evaluation identifies the US 50 Transportation Corridor as somewhat better than target with an unknown trend. A majority of the single noise level events are identified as unknown due to on-going changes in TRPA noise program.

Single Noise Event

Single noise events may result from the use of aircraft, watercraft, on-road vehicles (e.g., automobiles, motorcycles), and off-road vehicles (e.g., snowmobiles, all-terrain vehicles). Implementation of the Proposed Project Alternative would not affect aircraft noise because none of the alternatives would have an effect on aircraft operations or be located within the area of influence of an existing airport. The use of watercraft or off-road vehicles would not increase or otherwise be affected by any of the proposed alternatives.

Implementation of the Proposed Project Alternative would not affect attainment of the Single Event Noise Threshold, as defined in the TRPA Environmental Threshold Carrying Capacity Noise Standards, because single-event noise from project related increases in traffic would not result in a noticeable change in the traffic noise contours of area roadways (i.e., less than 3 dBA) based on existing traffic volumes. No other single-event noise sources would be created or modified due to construction or operation of the project.

Cumulative Noise Event

Implementation of the Proposed Project Alternative would not result in any short-term or long-term adverse noise effects. Implementing the Proposed Project Alternative would not affect attainment of the CNEL Threshold. Implementation of the project would increase short-term noise levels due to construction equipment and activities involved in constructing the new access road and widening along US 50.

Implementation of design features would ensure that construction of the Proposed Project Alternative would not exceed CNEL standards or vibration standards, disturb and/or disrupt the sleep of occupants of existing vibration-sensitive land uses in the project vicinity, nor create a substantial temporary increase in ambient noise or vibration levels.

Operational noise from use of the Round Hill Pines Access Road would not cause perceptible noise increases at nearby sensitive receptors and thus would not increase CNELs sufficiently to adversely affect or interfere with attainment of community noise thresholds established by TRPA. For these reasons, changes to the existing attainment status of the CNEL Threshold would not occur under the Proposed Project Alternative.

3.11 Air Quality

This section will describe the existing air quality conditions within the proposed project area and will evaluate potential impacts to air quality related to the implementation of the Proposed Project Alternative.

3.11.1 Regulatory Setting

3.11.1.1 Clean Air Act

The Clean Air Act (CAA) is the federal law that governs air quality and the Environmental Protection Agency (EPA) is responsible for implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the federal CAA, which was enacted in 1970 and amended by Congress in 1990.

Criteria Air Pollutants

The EPA is responsible for establishing national ambient air quality standards (NAAQS), as shown below in Table 3.11-1, the EPA has established primary and secondary NAAQS for the following criteria air pollutants (CAPs): carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM_{2.5} and PM₁₀), lead (Pb), and sulfur dioxide (SO₂). The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan, referred to as a state implementation plan (SIP), for areas that do not attain the NAAQS. The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with areas that are not in attainment of all NAAQSs to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and permitting of stationary air pollution sources in the nonattainment air basin.

General conformity requirements were adopted by Congress as part of the federal Clean Air Act Amendments of 1990 (Public Law 84-159). General conformity requires that all federal actions conform to the state air quality control plan referred to as a State Implementation Plan (SIP). Areas that do not meet or previously have not met national ambient air quality standards are required to prepare, submit, and implement a SIP or Federal Transportation Improvement Program demonstrating how attainment and maintenance of these standards will be achieved. An analysis that determines whether an individual project complies with the SIP or FTIP is called a conformity analysis. The Transportation Conformity Rule appears in 40 CFR, Parts 51 and 93.

The Tahoe Regional Planning Agency, in its role as the Tahoe Metropolitan Planning Organization (TMPO), is responsible for conducting conformity determinations for both the California and Nevada portions of the LTAB where conformity requirements apply. The most recent conformity determinations for the 2021-2024 FTIP was approved in February 2021 and the Round Hill Pines Access Project was included in the conformity analysis (TRPA 2021). Because the Proposed Project Alternative for the Round Hill Pines Access Project is consistent with the 2021-2024 FTIP for which an air quality conformity analysis has already been conducted, an independent conformity determination is not required.

Hazardous Air Pollutants

Air quality regulations also focus on toxic air contaminants (TACs) or, in federal terminology, hazardous air pollutants (HAPs). In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. Instead, EPA and ARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for TACs to limit emissions. (See the discussion of TACs under “State,” below, for a description of ARB’s efforts.) These, in conjunction with additional rules set forth by PCAPCD, described under “Local” establish the regulatory framework for TACs.

EPA has programs for identifying and regulating HAPs. Title III of the CAA directed EPA to promulgate national emissions standards for HAPs (NESHAP). The national emissions standards for HAPs may differ for major sources and for area sources of HAPs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year (TPY) of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered area sources. The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum available control technology for toxics. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), EPA is required to promulgate health risk-based emissions standards, where deemed necessary, to address risks remaining after implementation of the technology-based NESHAP standards.

The CAA also required EPA to issue vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

3.11.1.2 Tahoe Regional Planning Agency

TRPA threshold carrying capacity standards address CO, ozone, regional and sub-regional visibility, and nitrate deposition. Numerical standards have been established for each of these parameters, and management standards include reducing particulate matter, maintaining levels of oxides of nitrogen, reducing traffic volumes on US 50, and reducing vehicle miles traveled. These threshold indicator reporting categories and designations are described below in Table 3.11.1.2. In addition, the TRPA compacts states that the Regional Plan shall provide for attaining and maintaining federal, state, or local air quality standards, which ever are strictest, in the respective portions of the Region for which the standards are applicable (TRPA 2012). Se

Based on TRPA’s Initial Environmental Checklist, effects related to air quality were also evaluated based on whether the Proposed Project Alternative would:

- Result in substantial air pollutant emissions;
- Result in a deterioration of existing ambient air quality;
- Result in a creation of objectionable odors;
- Result in an alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally;
- Result in an increased use of diesel fuel.

Table 3.11-1. Attainment Status for the Lake Tahoe Air Basin in Douglas County

Pollutant	Threshold Indicator Reporting Category	National Designation ³	TRPA Designation ¹
Ozone	Highest 1-hour Average Concentration	--	Moderate improvement trend, at or somewhat better than target.
	Highest 8-hour Average Concentration	Attainment	Moderate improvement trend, somewhat worse than target.
	3-year Average of 4 th Highest 8-hour Average Concentration	--	Moderate improvement trend, at or somewhat better than target.
	Oxides of Nitrogen Emissions (Average tons/day)	--	Moderate improvement trend, considerably better than target.
Respirable Particulate Matter (PM ₁₀)	Highest 24-hour Average PM ₁₀ Concentration	Attainment	Little or no change trend, somewhat worse than target.
	Annual Average PM ₁₀ Concentration	--	Moderate improvement trend, considerably better than target.
Fine Particulate Matter (PM _{2.5})	24-hour PM _{2.5} Concentration	Attainment	Little or no change trend, at or somewhat better than target.
	Annual Average PM _{2.5} Concentration	Attainment	Little or no change trend, considerably better than target.
Visibility Reducing Particles	Regional Visibility 50 th Percentile	--	Little or no change trend, at or somewhat better than target.
	Regional Visibility 90 th Percentile	--	Little or no change trend, at or somewhat better than target.
	Sub-regional Visibility 50 th Percentile	--	Insufficient data.
	Sub-regional Visibility 90 th Percentile	--	Insufficient data.
Carbon Monoxide	Highest and 2 nd Highest 1-hour Carbon Monoxide Standard	Maintenance	Moderate improvement trend, considerably better than target.
	Highest and 2 nd Highest 8-hour Carbon Monoxide Standard	Maintenance	Moderate improvement trend, considerably better than target.
	Average Daily Winter Traffic Volumes	--	Moderate improvement trend, considerably better than target.
Nitrogen Deposition	Vehicle Miles Traveled	--	Moderate improvement trend, at or somewhat better than target.
Sulfur Dioxide	No Standard	Attainment	--
Nitrogen Dioxide	1-hour	Attainment	--
	1-year	Attainment	--
Odor	Non-numerical Standard	--	Implemented. ²
Lead (Particulate)	3-month average	Attainment	--

¹Source: 2015 TRPA Threshold Evaluation – Air Quality, EPA 2021

²Implemented refers to implementation of a management standard rather than monitoring the achievement of a numerical standard.

³Nonattainment: any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Attainment: any area that meets the national primary or secondary ambient air quality standard for the pollutant.

Maintenance: any area that has been re-designated from nonattainment to attainment due to successful completion of certain conditions.

3.11.2 Affected Environment

Douglas County is located within the LTAB and air quality is regulated by the EPA, TRPA, and the Nevada Department of Environmental Protection (NDEP) Bureau of Air Pollution Control (BACP) and Bureau of Air Quality Planning (BAQP). These agencies, as well as Douglas County, are responsible for developing rules, regulations, policies, and/or goals to comply with applicable legislation.

3.11.2.1 Climate Conditions

Lake Tahoe lies in a topographic depression between the crests of the Sierra Nevada and Carson ranges on the California-Nevada border at a surface elevation of approximately 6,260 feet above mean sea level. The LTAB is defined by the 7,000-foot contour, which is continuous around the Lake, except near Tahoe City. The mountains surrounding the Lake are approximately 8,000–9,000 feet in height on average, with some reaching 10,000 feet.

The constant water temperature of Lake Tahoe, at 600 feet below the surface, is approximately 39°F (4°C). This characteristic, in combination with the topographic location of the lake, defines one of the LTAB's most important atmospheric regimes. In the absence of strong synoptic weather systems in the Lake Tahoe Basin, shallow subsidence and radiation inversions occur throughout the year. In addition, the rapid radiation cooling at night regularly generates gentle down-slope nocturnal winds draining from the mountain ridges down to the shore and then fanning across the lake (Cahill and Cliff 2000).

Pollutants from local sources are trapped by frequent inversions in the LTAB, greatly limiting the volume of air into which the pollutants are mixed (e.g., diluted), which results in accumulation and elevated concentrations of pollutants. A second important meteorological regime is the transport of pollutants from the Sacramento Valley and San Francisco Bay Area because winds from these areas move upslope in the Sierra Nevada and the lake is located directly east of the Sierra Nevada crest (Cahill and Cliff 2000).

The project site generally experiences warm, dry summers and wet and snowy winters. According to the Western Regional Climate Center (WRCC), local climatology of the project site can be best represented by measurements at the Stateline-Harrah's, Nevada Station for the project area. The annual normal precipitation is approximately 13 inches, which primarily occurs from November through March in the form of snowfall. January temperatures range from a normal minimum of 23°F to a normal maximum of 42°F. August temperatures range from a normal minimum of 48°F to a normal maximum of 78°F (WRCC 2006a). The annual predominant wind direction and mean speed is from the south at 7 mph (WRCC 2006b, 2006c).

3.11.2.2 Existing Air Quality Conditions

Fugitive Dust

Fugitive dust is particulate matter that becomes airborne and has the potential to adversely affect human health or the environment. The most common forms of particulate matter are known as PM₁₀ and PM_{2.5}. Fugitive dust is mainly generated from construction activities such as earth moving, driving on haul roads, and ground disturbance.

Class I Areas

Construction activities contribute to visibility concerns through their primary PM_{2.5} and nitrogen oxides (NO_x) emissions, which contribute to the formation of secondary PM_{2.5}. Under the provisions of the CAA, EPA has designated specific areas in each state as Mandatory Class I Federal Areas, where visibility is an important value. These mandatory Class I areas are listed in 40 CFR 81.400–81.437. The project area is not located within a Class I area.

3.11.3 Environmental Consequences and Mitigation Measures

Significance Criteria

For the purpose of analysis, the following significance criteria are used to determine whether implementation of the proposed project would result in significant air quality impacts. The Proposed Project Alternative would result in significant adverse air quality effects if implementation would result in:

- Result in conflict with or obstruct implementation of an applicable air quality plan (such as a SIP or FTIP), violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- Expose sensitive receptors to substantial pollutant concentrations (including criteria air pollutants and HAPs),
- Result in the exposure of sensitive receptors to an objectionable odor source,
- Result in construction-generated emissions that exceed Nevada Administrative Code (NAC) Sections 445B.7665 (Heavy-duty Equipment Opacity) or 445B.22037 (PM Emissions-Fugitive Dust) standards (NAC 2008).
- Result in construction-generated or long-term operational (regional) emissions of reactive organic gases (ROG), NO_x, or PM₁₀ that exceed mass emissions of 82 pounds per day (lb/day), or
- Result in long-term operational (e.g. regional and local) emissions that exceed TRPA's numerical Environmental Threshold Carrying Capacities thresholds.

3.11.3.1 No Action Alternative

The No Action Alternative would result in a continuation of current roadway conditions and maintenance activities, which would not substantially affect air quality in the study area.

3.11.3.2 Proposed Project Alternative

Based on 40 CFR 93.126, the Proposed Project Alternative is considered an exempt project per Table II and the TRPA FTIP; therefore, this project is exempt from transportation conformity requirements. No long-term air quality impacts are anticipated and no further analysis is required.

Construction generated criteria air pollutant and precursor emissions

Construction activities are a source of dust and exhaust emissions that can have substantial impacts on local air quality (i.e., exceed state air quality standards for ozone, CO, PM₁₀, and PM_{2.5}). These impacts include emissions resulting from earthmoving and use of heavy equipment, as well as land clearing, ground excavation, cut-and-fill operations, paving, and roadway reconstruction. Emissions can vary substantially from day to day, depending on the level of activity, the specific operations, and the prevailing weather. Construction under the Proposed Project Alternative is expected to last no more than 6 months due to the TRPA grading season. Therefore, long-term construction-related impacts are not anticipated. Short-term construction-related impacts will be mitigated by implementation of design features would include implementing TRPA, NDEP, and NAC requirements with respect to best management practices, heavy-duty equipment opacity, and fugitive dust control to prevent adverse effects related to short-term construction related emissions. Therefore, construction-related emissions of criteria air pollutants and precursors would not conflict with or obstruct implementation of an applicable air quality plan, violate any air quality standard or contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant

concentrations. Construction activities would not result in a significant adverse effect related to pollutant emissions.

Long-Term Operational (Regional) Criteria Air Pollutant and Precursor Emissions

Long-term operational emission sources associated with the Proposed Project Alternative would include vehicle trips by travelers along US 50, visitors to Round Hill Pines Resort, concessionaire staff, maintenance staff, and Forest Service personnel as well as occasional operation of maintenance equipment. Long-term operational emissions of ROG, NOX, PM10, and PM2.5 for the Proposed Action Alternative would be small compared with applicable significance thresholds that are tied to attainment planning efforts and would not contribute substantially to a long term regional air quality impact and it would not affect TRPA's attainment designations.

Localized Mobile-Source Emissions

The LTAB is designated as a maintenance area for the national ambient air quality standards for CO. Thus, pursuant to the procedures for a hot-spot analysis in the CFR (40 CFR Section 93.123; CFR 2008) the potential for the proposed project to result in localized concentrations of CO that exceed the national ambient air quality standards can be assessed qualitatively.

The Proposed Action Alternative has the potential to increase vehicle trips to and from the Round Hill Pines Resort. Carbon monoxide emissions are a direct function of vehicle idling time and, thus, traffic flow conditions. Under specific meteorological conditions, the concentration of CO emissions near congested roadways and/or intersections may reach unhealthy levels with respect to local sensitive land uses such as residential areas. The improvements associated with the Proposed Project Alternative would result in an overall reduction of congestion along US 50 and the access road to the Round Hill Pines Resort. The relocation of the existing access road into the Round Hill Pines Resort and the addition of the northbound median turn lane will result in a reduction of congestion along US 50. The Proposed Project Alternative would not result in or contribute to CO concentrations that exceed applicable 1-hour and 8-hour CO ambient air quality standards. As a result, no adverse effect on localized CO concentrations would occur with implementation of the Proposed Project Alternative. The LTAB has been designated as attainment with respect to the national ambient air quality standards for PM10 and PM2.5. Therefore, no analysis of PM10 and PM2.5 hot spots is needed (FHWA and EPA 2021).

Also, the proposed project is not anticipated to have any meaningful effects with respect to mobile-source air toxics (MSATs), which are the subset of EPA-recognized HAPs that are generated by mobile sources, because the proposed project would not have any meaningful effect on traffic volumes or the mix of vehicles that travel on the affected roadways.

Odor Emissions

Construction activities that would take place could result in temporary generation of objectionable odors associated with diesel exhaust, asphalt paving that may be considered offensive to some individuals. Objectionable odors may also be associated with striping installation. However, these odors would be temporary and would generally not be produced in the same locations during the entire construction period. Furthermore, such odorous emissions generally disperse rapidly with distance from the source and construction equipment would be staged as distant as possible from any nearby residences or other sensitive receptors. Therefore, these activities would not result in the frequent exposure of receptors to objectionable odorous emissions.

Hazardous Air Pollutant Emissions

Construction-related activities that would take place under the Proposed Project Alternative would result in temporary, short-term emissions of diesel PM from the exhaust of off-road heavy-duty diesel equipment used for site preparation (e.g., excavation, grading, and clearing); paving; trucks hauling materials to and from construction staging areas; and other miscellaneous activities. The potential cancer risk from the inhalation of diesel PM is a more serious risk than the potential non-cancer health impacts (California Air Resources Board 2003). Consequently, for the purposes of this analysis, this discussion focuses on cancer rather than non-cancer risks.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to HAP emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. It is positively correlated with time, meaning that a longer exposure period would result in a higher level of exposure to the exposed individual. In other words, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment (OEHHA), Health Risk Assessments, which determine the exposure of sensitive receptors to HAP emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the duration of exposure (OEHHA 2001). Due to the nature of the project, the use of mobilized equipment for construction activities would be temporary at any one location, and would dissipate with increasing distance from the source.

In addition, construction equipment would be staged as distant as possible from any nearby residences and other sensitive receptors (Design Feature NOI-3). On-going maintenance of the shared-use path would consist of occasional maintenance vehicles and repair equipment operating along the corridor. However, no new stationary sources or continuously operating area sources of HAPs would be introduced to the project area. For these reasons, and because of the highly dispersive properties of diesel PM (Zhu et. al. 2002) short-term construction-generated and long-term operational HAP emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds of 10 in one million or a Hazard Index greater than 1.0 at the maximally exposed individual. Therefore, the project would not have an adverse effect on the environment related to exposure to HAPs.

3.11.3.3 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to air quality. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

MM AQ-1. Reduce construction-generated emissions.

3.11.4 Consequences for TRPA Environmental Threshold Carrying Capacities

This section summarizes the effects of implementing the Proposed Project Alternative on the thresholds established by TRPA for air quality. The following Indicator Reporting Categories for air quality have been established by TRPA:

- Carbon Monoxide and Traffic Volumes;
- Ozone, Particulate Matter, Wood Smoke, Regional Visibility, and Sub-Regional Visibility;
- Vehicle Miles Traveled and Atmospheric Deposition; and
- Odors.

Carbon Monoxide and Traffic Volumes

According to the most recent threshold evaluation, TRPA's ETCC for carbon monoxide is "considerably better than target" (TRPA 2015). The potential for CO hot spots is greater in winter because motor vehicles generate higher emissions of CO when ambient temperature is low (ARB 2013). Trips generated by the project are not anticipated to occur between the hours of 4:00 p.m. and midnight in the US 50 corridor during the months of November through February, as the Round Hill Pines Resort is only open seasonally (May to October). Long-term operational (local) mobile-source CO emissions would not violate an air quality standard (i.e., 8-hour TRPA standard of 6 ppm), contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. Therefore, the Proposed Project Alternative would not exceed the applicable significance criteria, and it would not be expected that the project would affect attainment of relevant TRPA thresholds for CO.

Ozone, Particulate Matter, Wood Smoke, Regional Visibility, and Sub-Regional Visibility

As discussed in the analyses above, short-term construction-related emissions and long-term operational emissions of ozone precursors, ROG and NOX, and particulate matter, including PM10 and PM2.5, would not exceed the mass emission thresholds established by air districts with jurisdiction in the LTAB and used by TRPA for analysis purposes. Because construction and operation of the Proposed Project Alternative would not exceed the local significance criteria, the net increase in long-term daily emissions of PM10 and ozone precursors would be nominal. In addition, because the project would not result in open burning or the introduction of new wood-burning fireplaces or other wood-burning devices in the LTAB, the proposed project would not affect attainment of the TRPA thresholds for wood smoke, regional visibility, or sub-regional visibility.

Vehicle Miles Traveled and Atmospheric Deposition

TRPA adopted its Vehicle Miles Travelled (VMT) threshold in 1982 as both a water quality and air quality threshold. The TRPA thresholds for air quality, under both visibility and nitrate deposition, include the following management standard: "reduce vehicle miles of travel by 10 percent of the 1981 base values." The indicator for TRPA's VMT threshold states that there shall be a 10 percent reduction in VMT below the 1981 peak summer day levels. The Tahoe Region has been in compliance with this standard since 2007. Considering that traffic volumes have not increased since 2008, it can be concluded that the region is currently in attainment of the VMT threshold. Because the proposed project is consistent with the RTP, it would not conflict with TRPA's VMT threshold.

Odor

As discussed, the Proposed Project Alternative is not expected to result in any new permanent odor sources and odors associated with project construction (e.g., diesel exhaust from equipment and the application of architectural coatings) would be temporary and would generally not be produced in the same locations during the entire construction period. Furthermore, such odorous emissions generally disperse rapidly with distance from the source and construction equipment would be staged as distant as possible from any nearby residences, schools, or other sensitive receptors. Therefore, the proposed project would not result in the introduction of new odor sources or new odor exposure problems in the LTAB.

3.12 Cumulative Impacts

Cumulative impacts are impacts that result from the incremental effect of a proposed action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7). The purpose of a cumulative effects analysis is to ensure that federal agencies consider the full range of the consequences of their actions when making decisions in order to move towards sustainable development (CEQ 1997).

FHWA guidance states that the degree to which cumulative impacts need to be addressed in an EA depends on the potential for the impacts to be significant, and will vary by resource, project type, geographic location, and other factors. The 2021 NDOT Statewide Transportation Improvement Program (STIP), 2020 TRPA Regional Transportation Plan, and the cumulative list of projects below (Table 3.12-1) includes projects along the US 50 corridor within the project area as well as planned improvements at the Round Hill Pines Resort.

Table 3.12-1: List of Cumulative Projects

Project Name	Location	Description
Round Hill Pines Redevelopment Project (Phase 2)	Round Hill Pines Resort	Consolidate on-site parking by constructing 2 parking lots and distribution roads within the Round Hill Pines Resort. Planned construction in 2021.
US 50 Preservation in the Tahoe Basin	US 50, from CA/NV Stateline to Kings Canyon Road in Douglas County	Mill and overlay roadway surface, ADA, hydraulic and safety improvements. Planned for construction in 2022.
US 50, Safety and Hydraulic Improvements	US 50, from 0.37 miles west of Warrior Way to 0.22 miles East of Tahoe Drive	Install infiltration basin along US 50 and signal at Warrior Way
Source: NDOT 2021 Statewide Transportation Improvement Program, LTBMU Management Plan		

3.12.1 Regulatory Setting

The Council on Environmental Quality (CEQ) developed *Considering Cumulative Effects Under the National Environmental Policy Act*, which recommends identifying those resources that could experience cumulative impacts, and then determining the separate effects of past actions, present actions, the proposed action, and other future actions. CEQ notes that, “most often, the historical context surrounding the resource is critical to developing baselines” and supporting decision-making (CEQ 1997). This historical context is presented in the Affected Environment section, below.

3.12.2 Environmental Consequences and Mitigation Measures

The environmental consequences of the No Action Alternative and the Proposed Project Alternative on individual resources are presented throughout this EA. Included below are the overall cumulative impacts that may be anticipated when the effects of the Proposed Project Alternative are combined with other past, present, and reasonably foreseeable future actions.

The cumulative impact assessment presented in this EA focuses on resources for which the cumulative projects or plans would have measurable impacts on the resource. The contribution of the Project’s impacts to cumulative impacts was then assessed. The cumulative impact analysis should be commensurate with the potential for adverse impacts therefore, only resources that are

expected to experience long-term adverse impacts were assessed for cumulative impacts in this section. Those resources include:

- Aesthetic and Visual Resources
- Biological Resources (Vegetation)
- Earth Resources (Impervious Cover)
- Hydrology and Water Quality

3.12.2.1 No Action Alternative

Implementation of the No Action Alternative would result in a continuation of current conditions. This alternative would not involve the relocation of the Round Hill Pines intersection, the new access road, or widening along US 50 to accommodate a median left turn lane/acceleration lane.

3.12.2.2 Proposed Project Alternative

Aesthetic and Visual Resources

The cumulative setting for aesthetic and visual resources includes the proposed Round Hill Pines Resort Redevelopment Phase 2 Project that will be constructed by the LTBMU in 2021. The proposed project will include the construction of parking lots, an entrance road that will tie into the Proposed Project Alternative, 2 lane interior roads and parking areas, and a roundabout area that will serve as a public drop-off area for visitors to the Resort.

As discussed in Section 3.3, the proposed project is also located within TRPA Shoreline Unit 29, Zephyr Cove which includes the Round Hill Pines Resort. The TRPA threshold composite score for Shoreline Unit 29 is 9 and the TRPA Shoreline Study characterizes the scenic quality of this unit as moderate and rates its level of scenic quality as 2. Construction of the Round Hill Pines Resort Redevelopment phase 2 project would result in tree removal and grading. Construction of these improvements would result in increased potential for impacts to the Zephyr Cove Shoreline Unit 29.

The proposed Round Hill Pines Resort redevelopment phase 2 project would remove approximately 80 trees. Avoidance and minimization efforts during construction would be implemented to reduce the number of trees removed. Existing trees located between the shoreline and the parking area would not be removed and would continue to serve as a visual screen, obscuring the view of the parking lot areas and relocated access road. These avoidance and minimization efforts would be consistent with proposed efforts mentioned in Section 3.3.3. Thus cumulative impacts to aesthetic and visual resources would be less than significant, and the Proposed Project Alternative's contribution to this cumulative effect would not be significant.

Biological Resources (Vegetation)

The cumulative setting for biological resources (vegetation) includes the proposed Round Hill Pines Resort Redevelopment Phase 2 Project that will be constructed by the LTBMU in 2021. The proposed project will include the construction of parking lots, an entrance road that will tie into the Proposed Project Alternative, 2 lane interior roads and parking areas, and a roundabout area that will serve as a public drop-off area for visitors to the Resort.

The proposed Round Hill Pines Resort Redevelopment Phase 2 Project would include clearing and grubbing, as well as tree removal within areas designated as montane coniferous forests primarily within TRPA designated Land Capability Zone 4. Minimization efforts during design have reduced the clear zone width along the LTBMU access roads within the resort area. By reducing the clear zone widths, the LTBMU has reduced the number of trees to remove and the amount of land that will require clearing and grubbing. These avoidance and minimization

efforts would be consistent with proposed efforts mentioned in Section 3.4.3. Thus cumulative impacts to Biological Resources (Vegetation) would be less than significant, and the Proposed Project Alternative's contribution to this cumulative effect would not be significant.

Earth Resources (Impervious Cover)

The cumulative setting for earth resources (impervious cover) includes the proposed Round Hill Pines Resort Redevelopment Phase 2 Project that will be constructed by the LTBMU in 2021 and the US 50 Rehabilitation Project constructed by NDOT in 2022. The US 50 rehabilitation project would consist of a mill and pavement overlay, ADA improvements, drainage and safety improvements. No additional impervious pavement will be added to US 50 as part of the NDOT US 50 Rehabilitation Project.

Construction of the LTBMU Round Hill Pines Resort Redevelopment Phase 2 Project would be entirely located within Land Capability District 4. This project would result in an additional 1.23 acres of impervious pavement due to the relocated bike path, proposed additional parking lots, roundabout visitor drop-off area, and administrative road and parking area. Based on the TRPA threshold evaluation, Land Capability District 4 is listed as in compliance and trending towards "considerably better than target".

Any new coverage associated with these projects would be consistent with TRPA land coverage regulations. Implementation of the project would not impede progress toward attainment of the TRPA threshold reporting category for Impervious Cover. Thus cumulative impacts to earth resources (impervious cover) would be less than significant, and the Proposed Project Alternative's contribution to this cumulative effect would not be significant.

Hydrology and Water Quality

The cumulative setting for hydrology and water quality includes the proposed Round Hill Pines Resort redevelopment phase 2 project that will be constructed by the LTBMU in 2021 and the US 50 rehabilitation project constructed by NDOT in 2022. The US 50 rehabilitation project would consist of a mill and pavement overlay, ADA improvements, drainage and safety improvements. Hydrology and Water Quality is discussed in Section 3.7.

Construction of the Round Hill Pines Resort Redevelopment Phase 2 would result in an increase of impervious pavement due to the proposed additional parking lots, roundabout visitor drop off area, and administrative road and parking area. The US 50 rehabilitation project would result in drainage improvements along US 50, but the culverts located within the Round Hill Pines Resort would not be disturbed.

Compliance with mitigation measures would ensure that construction activities associated with these projects would not adversely impact the hydrology and/or water quality of Lake Tahoe. These mitigation measures would be developed by LTBMU and NDOT in coordination with TRPA and would be consistent with proposed efforts mentioned in Section 3.7.3. Thus cumulative impacts to hydrology and water quality would be less than significant, and the Proposed Project Alternative's contribution to this cumulative effect would not be significant.

3.13 Avoidance, Minimization, and Mitigation Measures

The following table summarizes the mitigation measures for each resource identified in the Environmental Assessment for the Round Hill Pines Access Project. The table also identifies the timing of the mitigation measures and the responsible agency or party.

Mitigation Measure	Implementation Timing	Responsible Agency or Party
Aesthetics and Visual Resources		
MM AES-1. Design applicable structures to be consistent with NDOT, TRPA, and LTBMU design standards and design review guidelines and compatible with existing architectural features in the Round Hill Pines Resort area. Project structures such as guardrails and retaining walls will be designed to meet TRPA design standards (Chapter 36 of the TRPA Code) and design review guidelines. Structures located within the NDOT right-of-way (ROW) will also meet NDOT design standards. A narrow range of colors and materials will be used. Materials will be primarily natural or natural appearing. Ranges of subdued earth tone colors will be used that blend, rather than contrast, with the existing vegetation and soils color in and around the immediate area. The project will reflect the visual characteristics of line, form, color, and texture found in the characteristic landscape.	Prior to construction	FHWA-CFLHD
MM AES-2. Design project features consisted with Chapter 66 of the TRPA Code. The project will comply with Chapter 66 of the TRPA Code. The total visible area of lakeward facing surfaces of project features (e.g. retaining walls and safety rails) will not exceed the total surface area allowed.	Prior to construction	FHWA-CFLHD
Biological Resources: Aqualic Resources, Vegetation, and Wildlife		
MM BIO-1. Minimize ground and vegetation disturbance, and limit construction and staging footprints. Ground and vegetation disturbance will be minimized during construction to avoid or minimize loss of native vegetation and disturbance to terrestrial wildlife habitat. Construction staging, vehicle use and parking, and placement of equipment and materials will be restricted the designated staging area only. The construction limits will be identified by placing silt fencing or other fencing mechanism to deter accidental encroachment.	Prior to construction	FHWA-CFLHD

<p>MM BIO-2. Minimize removal of trees that are 24-inches diameter at breast height (dbh) or greater. The proposed widening along US 50 and construction of the relocated Round Hill Pines Access Road will require the removal of live trees over 24 dbh or greater. For any tree 24 inches dbh or greater that will be felled during the construction of the project, removal will occur, as allowable, under circumstances specified in Section 61.4(A)(7) of the TRPA Code. Section 61.1.4(A)(7) states that, for EIP Projects, "Trees larger than 30 inches dbh in the westside forest types and larger than 24 inches dbh in eastside forest types may be removed when it is demonstrated that the removal is necessary for the activity." The Round Hill Pines Access Project is an EIP Project (EIP No. 04.01.03.0137) and subject to this Code provision.</p>	Prior to and during construction	FHWA-CFLHD
<p>MM BIO-3. Coordinate tree felling schedule with the Lake Tahoe Basin Management Unit to minimize effects to migratory birds. The avian breeding/nesting season occurs approximately between March 1 through September 1, depending on species and weather. To avoid impacts to migratory birds, conduct tree felling after September 1 and before March 1. Coordinate with LTBMU to utilize their staffing and expertise to fell and remove trees. Tree slumps would not be removed at this time and would remain in ground until the grading season (May 1st to October 15th).</p> <p>If vegetation or other substrates that could support nesting birds would be removed during the nesting season, a qualified approved biologist will be retained to conduct focused preconstruction surveys for active nest sites of migratory birds. The survey area will be limited to the areas where project activities could lead to direct destruction of active nests. The results of nesting bird surveys conducted between March 1 and June 15 will be considered valid for no more than 14 days (i.e., the onset of each construction phase should begin no later than 14 days after these surveys are completed). Results of surveys conducted after June 15 can be considered valid for up to 30 days. Because most neotropical migrant birds that nest in the region typically arrive and begin establishing territories between March and June, and new individuals and species continually arrive in the area during this period, negative survey results (e.g., absence, no nesting activity) for a given location may be valid only for a short period. If an active nest is located, removal of the nest site will be avoided until it is no longer active. Exclusionary buffer zones (to be determined based on species-specific needs) will be created surrounding any active nests within the project area. Buffers will be established by a qualified biologist prior to the start of construction. If an area is given clearance to proceed with construction and nesting subsequently occurs, it will be assumed that the individuals are acclimated to the ongoing disturbance of construction. If circumstances exist such that future activities may result in the abandonment or failure of the nest, as determined by a qualified biologist, an appropriate exclusionary buffer will be established.</p>	Prior to and during construction	FHWA-CFLHD and LTBMU

<p>MM BIO-4. Prevent the contamination of construction-related materials by noxious weeds and invasive plant species. The following actions will ensure that construction-related materials entering or leaving the project area are not potential sources of noxious weed infestations.</p> <ul style="list-style-type: none"> • The construction contractor will ensure that any clothing, footwear, and equipment used during construction is free of soil, seeds, vegetative matter or other debris or seed-bearing material before entering the construction area. • Where it is not possible to keep equipment out of sites infested with noxious weeds, the equipment will be cleaned so that it is free of soil, seeds, vegetative matter or other debris before being moved from infested sites to un-infested sites and before being transported out of the project area. • The construction contractor will ensure that any fill soil, mulch, seeds, and straw materials used during construction and implementation of BMPs are weed-free. Certified weed-free material will be used. • All earth-moving equipment, gravel, fill, or other materials will be required to be weed free. Sand, gravel, rock, or organic matter from an approved onsite source will be used when possible. Otherwise, weed-free materials will be obtained from gravel pits and fill sources that have been surveyed and approved by a botanist or ecologist at the LTBMU. • The construction contractor will ensure that equipment and vehicles are washed when exiting the perimeters of infested areas before proceeding outside the infested perimeters to un-infested areas. 	During construction	FHWA-CFLHD, LTBMU, Contractor
<p>MM BIO-5. Revegetate/landscape using appropriate native planting mixes. Appropriate plant species native to the area that do not require long-term irrigation, or species approved by a qualified botanist for local use, will be used when revegetating disturbed areas and for landscaping improvements. This measure will contribute to minimizing impacts to areas that are temporarily disturbed during project construction, but will also help to minimize permanent loss of native habitats. LTBMU will provide assistance with landscape design for permanent vegetation establishment.</p>	Prior to construction	FHWA-CFLHD, LTBMU
Cultural Resources		
<p>MM CR-1. Cease work and implement notification procedures for previously undiscovered archaeological and historical resources. In the event that previously undocumented cultural resources or human remains are discovered during any project-related ground-disturbing</p>	During construction	FHWA-CFLHD, LTBMU, NDOT, TRPA

<p>activities, the construction crew will immediately cease ground-disturbing activities in the vicinity of the find and the procedures of 36 CFR Part 800 will be implemented. A qualified archaeologist approved by FHWA-CFLHD will be consulted to evaluate the resource in accordance with Section 106 and TRPA guidelines. If the discovered resource is determined to be significant per NRHP and TRPA criteria, mitigation measures consistent with the TRPA Code will be devised and a mitigation plan submitted for approval by the FHWA-CFLHD, NDOT, LTBMU, and TRPA. Any necessary archaeological excavation and monitoring activities will be conducted in accordance with prevailing professional standards and the Federal Secretary of the Interior's Standards and Guidelines for Identification of Cultural Resources and Professional Qualifications (National Park Service 1983). Mitigation, in accordance with a plan approved by FHWA-CFLHD, NDOT, LTBMU, and TRPA will be implemented before ground-disturbing work in the area of the resource find can continue.</p> <p>The State of Nevada Revised Statutes Section 383.170 requires a person to report to the Office of Historic Preservation immediately upon discovery of a previously unreported Native American interment inadvertently disturbed by ground-disturbing activities such as construction, logging, or farming. The Office of Historic Preservation must consult immediately with the Nevada Indian Commission and notify the appropriate Indian tribe. The authorized tribe or their representative, with the permission of the landowner, must inspect the burial site and recommend an appropriate means for the treatment and disposition of the site and all associated artifacts and human remains. If the burial site is located on private land, Section 383.170 allows, at the owner's expense, the reinterment of all human remains and associated artifacts in a location not subject to further disturbance if the Indian tribe fails to make a recommendation within 48 hours after it receives notification of the find.</p>		
Hydrology and Water Quality		
<p>MM BMP-1. Develop and Implement a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP will be prepared by a qualified SWPPP practitioner and/or a qualified SWPPP developer that identifies water quality controls consistent with TRPA and Nevada Division of Environmental Protection (NDEP) requirements, and will ensure that runoff quality meets TRPA water quality requirements under the TRPA Code, and maintains beneficial uses of Lake Tahoe, as defined by Section 445A.191 of the Nevada Administrative Code (NAC). The SWPPP will describe the site controls, erosion and sediment controls, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures, and management controls unrelated to stormwater. Best management practices (BMPs) identified in the SWPPP will be implemented during all site development activities. The following will be required elements of the SWPPP:</p> <p>(1) Temporary BMPs to prevent the transport of earthen materials and other construction waste materials from disturbed land areas, stockpiles, and staging areas during periods of precipitation or runoff, including: filter fence, fiber roll, erosion control blankets, mulch</p>	Prior to construction, during construction	FHWA-CFLHD, LTBMU, NDOT, TRPA

<p>(such as pine needles and wood chips).</p> <p>(2) TRPA pre-grade inspection a minimum of 48-hours prior to commencement of construction related activities to ensure proper and adequate installation of the temporary erosion control measures.</p> <p>(3) Designated staging and storage areas will be protected by construction fencing and/or silt barriers, as appropriate. Following project completion, all areas used for staging will be restored to preconstruction conditions.</p> <p>(4) Temporary BMPs to prevent the tracking of earthen materials and other waste materials from the project site to offsite locations, including stabilized points of entry/exit for construction vehicles/equipment and designated vehicle/equipment rinse stations, and sweeping.</p> <p>(5) Temporary BMPs to prevent wind erosion of earthen materials and other waste materials from the project site, including routine application of water to disturbed land areas and covering of stockpiles with plastic or fabric sheeting.</p> <p>(6) Earthmoving activities will be limited to May 1 through October 15, unless a grading ordinance exemption is granted by TRPA. At the end of the grading season or before completion of the project, all surplus or waste earthen materials from the project site will be removed and disposed of at a TRPA-approved disposal site or stabilized on-site in accordance with TRPA regulations.</p> <p>(7) A spill prevention and containment plan will be prepared and implemented. Project contractors will be responsible for storing on-site materials and temporary BMPs capable of capturing and containing pollutants from fueling operations, fuel storage areas, and other areas used for the storage of hydrocarbon-based materials. This will include maintaining materials on-site (such as oil absorbent booms and sheets) for the cleanup of accidental spills, drip pans beneath construction equipment, training of site workers in spill response measures, immediate cleanup of spilled materials in accordance with directives from the TRPA and the NDEP, and proper disposal of waste materials at an approved off-site location that is licensed to receive such wastes.</p> <p>(8) Protective fencing, as needed, to prevent damage to trees and other vegetation to remain after construction, including tree protection fencing and individual tree protection such as wood slats strapped along the circumference of trees.</p> <p>(9) Daily inspection and maintenance of temporary BMPs. The contractor will be required to maintain a daily log of Temporary Construction BMP inspections and keep the log on site during project construction for review, as needed.</p>		
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(10) Develop and implement a Rain Event Action Plan as a component of the SWPPP that will include monitoring the weather on a daily basis and implementing pre-defined action within the SWPPP to avoid discharges during rain events in the construction period. During periods of inclement weather, and when the weather forecasts exceed a pre-defined threshold for forecasted precipitation (typically 60 percent or greater), active areas of construction will be stabilized and all earth moving activities will cease.		
<p>MM BMP-2. Develop Permanent BMPs to control stormwater runoff and minimize erosion and the transport of sediment and other pollutants of concern to Lake Tahoe. Permanent slope stabilization measures will be designed and implemented to address the fill slopes associated with the widening along US 50 and the new access road. These measures will be aligned with the proposed road grades and may consist of a combination of bio-technical and revegetation methods such as soil restoration, soil amendment, revegetation with native seed mixes, planted geotextiles, or other features to be developed during final design. On relatively flat existing side slopes (less than 20 percent), stormwater would runoff as sheet flow onto the adjacent downstream pervious area and naturally infiltrate.</p> <p>Place riprap aprons at culvert outlets to dissipate flow energy before naturally infiltrating into the surrounding well drained wooded areas. Coordination with LTBMU, NDOT, and TRPA will be ongoing during permanent BMP design.</p>	Prior to construction	FHWA-CFLHD, LTBMU, NDOT, TRPA
<p>MM BMP-3. Provide mitigation for additional impervious pavement. Based on preliminary design, the project would result in the addition of 26,136 square foot (0.6 acre) of impervious pavement that could alter runoff patterns. The addition of impervious pavement will continue to be evaluated as the project progresses towards final design. The TRPA Code of Ordinances requires that any project that results in the creation of additional impervious coverage will require Water Quality Mitigation. FHWA-CFLHD will continue to work with LTBMU on water quality mitigation opportunities located on Forest Service land.</p>	Prior to construction, during construction	FHWA-CFLHD, LTBMU, TRPA
Recreation		
<p>MM REC-1. Use signage and/or additional public information methods to notify Stateline-to-Stateline trail users that access will be modified during construction. Use conflicts will be reduced or minimized on the Stateline-to-Stateline trail through use of informational signage posted at the Round Hill Pines Resort and trailheads to alert users of possible obstacles or changes in access. These notifications can also be posted on the LTBMU website.</p>	Prior to construction, during construction	FHWA-CFLHD, LTBMU
Noise		
<p>MM NOS-1. Implement noise controls on construction equipment. Construction equipment will be properly maintained and equipped with noise control, such as mufflers, in accordance with manufacturers' specifications.</p>	During construction	FHWA-CFLHD

MM NOS-2. Implement construction hour limits. Typical construction activities will be limited to the hours between 8:00 a.m. and 6:30 p.m., during which such activities are exempt from noise levels identified in Chapter 68 of the TRPA Code of Ordinances. Emergency work to protect life or property is exempt from these hourly limits and applicable noise standards. If construction activities must run past exempted hours (e.g., during wastewater line relocation or highway closures), any nearby sensitive receptors (less than 200 feet from those activities) will be given at least 1 week notice of such activities.	During construction	FHWA-CFLHD
MM NOS-3. Consider equipment placement and operation during construction. Construction equipment will be arranged to minimize travel adjacent to noise-sensitive receptors and turned off during prolonged periods of non-use. Construction equipment will be staged and construction employee parking will be located in designated areas only. All construction equipment and vehicles used for project construction will be fitted with the factory installed muffling devices and will be maintained in good working order. Should noise complaints be received, FHWA-CFLHD and/or the project contractor will attempt to respond within 1 working day and to resolve noise complaints as soon as possible.	During construction	FHWA-CFLHD
Air Quality		
MM AQ-1. Reduce construction-generated emissions. The contractor will implement practices that minimize exhaust and fugitive dust emissions during construction. Measures to be implemented will comply with TRPA and NDEP. More specifically, the measures will conform with: NAC Sections 44B.7665 and 445B. 22037 related to opacity (visible emissions) for heavy duty equipment and fugitive dust; <ul style="list-style-type: none"> • Section 33.1 of the TRPA Code related to seasonal limitations on construction and dust control measures; • Section 65.1.8 of the TRPA Code related to vehicle idling time limitations; • TRPA's Standard Conditions of Approval for Grading Projects (Attachment Q) 	During construction	FHWA-CFLHD, TRPA

CHAPTER 4: SECTION 4(F) PROPERTIES

4.1 Section 4(f)

This section provides an evaluation of the Round Hill Pines Access Project relative to Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303). Section 4(f) of the Department of Transportation Act of 1966, a law applying only to agencies within the U.S. Department of Transportation (USDOT), states it is the policy of the federal government “that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites” (49 U.S.C. 303). Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, State, or local significance located on public or private land, only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use; or
- FHWA determines that the use of the property, including measures to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact, as defined in 23 CFR 774.17, on the property.

4.2 Section 4(f) Resources

The study area used to identify Section 4(f) resources was dependent on the Section 4(f) property type. Recreational resources were identified using LTBMU, TRPA, and Douglas County planning documents. There are no historic sites, wildlife, or waterfowl refuges located within the Project Area and therefore were not considered. Table 4.1-1 lists potential Section 4(f) properties within the Project Area and whether the Proposed Project would result in a “use” of the property.

Table 4.1-1 Potential Section 4(f) Resources Located within the Project Area

Resource	Official with Jurisdiction	Type of Resource	Anticipated Section 4(f) Use
Round Hill Pines Resort	U.S. Forest Service Lake Tahoe Basin Management Unit	Recreational: The Round Hill Pines Resort is located on LTBMU property and includes public beach access.	<i>De minimis</i>
Stateline-to-Stateline Bike Trail, South Demonstration segment	Douglas County	Recreational: The Stateline-to-Stateline Bike Trail is a 2.2-mile trail segment beginning at Laura Drive and ending on the Round Hill Pines Resort property at US 50.	<i>De minimis</i>
Dispersed Lake Access Points and Foot Trails	N/A	Several informal footpaths are located within the project area, which are not officially designated as trails by LTBMU. These trails and trail networks provide access to parking areas, beach areas, and other recreation destinations located at Round Hill Pines Resort.	Not applicable for Section 4(f) protection, therefore there is no use.

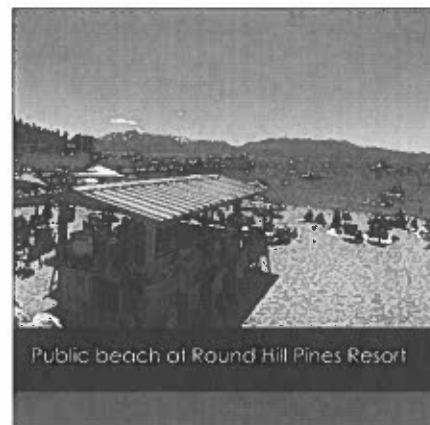
4.2.1 Round Hill Pines Resort

Round Hill Pines Beach and Marina is located within the project area along US 50, on the east

shore of Lake Tahoe. It is located on U.S. Forest Service land managed by the LTBMU but the resort and marina facilities are operated by a concessionaire through a special use permit from the LTBMU. Round Hill Pines Beach is considered a major destination at the southern end of Marla Bay and is open seasonally from May through September, weather dependent.

Round Hill Pines Resort provides the following recreational facilities:

- The main beach area is a narrow (75 to 100-foot wide) 1000-foot long stretch of sandy beach along the east shore of Lake Tahoe. Two paved concrete parking areas serve the resort area. Two additional asphalt parking areas will be added in Summer 2021. The resort is open for May to September from 8:00am to sunset.
- Day use activities offered along the beach include swimming, beach volleyball, and general recreation along the beach.
- The Round Hill Pines Marina offers watercraft mooring, boat access at the pier, boat, jet-ski, kayak, and stand up paddleboard rentals. Daily cruises along Lake Tahoe are also offered by the Tahoe Serenity, which is docked at the marina.

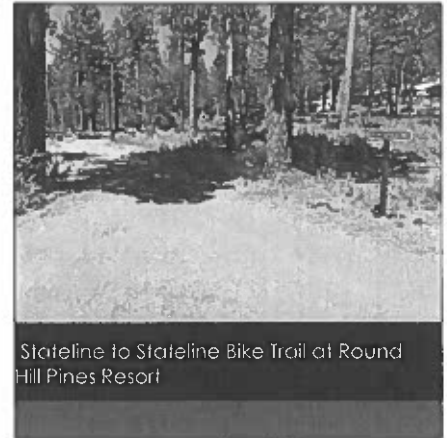


Public beach at Round Hill Pines Resort

- A newly renovated restaurant and restrooms are located at the edge of the beach near the pier.

4.2.2 Stateline-to-Stateline Bike Trail

The Stateline-to-Stateline Trail (South Demonstration Segment) is located on the east shore of Lake Tahoe beginning at Laura Drive and ending on the Round Hill Pines Resort property at US 50. The segment is approximately 2.2 miles in length and includes a 10-foot wide paved path with 2-foot wide shoulders on both sides. This segment is a component of the larger Nevada Stateline to Stateline Bikeway and overall regional shared-use path network.



Stateline to Stateline Bike Trail at Round Hill Pines Resort

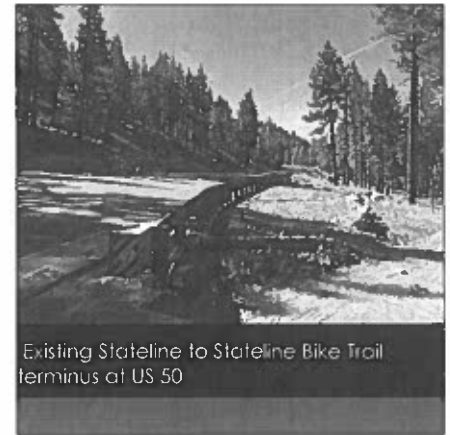
4.3 Use of Section 4(f) Resources

The “use” of a Section 4(f) resource is defined and addressed in the FHWA Regulations at 23 CFR 774.17. “Use” is defined as:

“Except as set forth in Sections 774.11 and 774.13, a ‘use’ of Section 4(f) property occurs: (1) when land is permanently incorporated into a transportation facility; (2) when there is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose as determined by the criteria in Section 774.13(d); or (3) when there is a constructive use of a Section 4(f) property as determined by the criteria in Section 774.15.”

As part of the Proposed Project, the Round Hill Pines access road will be relocated further to the north and constructed on NDOT and LTBMU-managed land. The access road would extend predominately through LTBMU open space that is designated as the Round Hill Pines Resort. Approximately 2.3 acres of open space would be converted to a transportation use for the access road. The Lake Tahoe Basin Management Unit, in partnership with the concessionaire, is conducting phased improvements to the Round Hill Pines Resort that will include parking consolidation and improving traffic flow into the newly designated parking lot areas. The Proposed Project would support this future LTBMU improvement project and would also provide a safer access location for Resort visitors.

Also as part of the Proposed Project, a 549-foot long portion of the Stateline-to-Stateline Bike trail will be removed due to construction of the relocated access road and will not be replaced. The Stateline-to-Stateline Bike trail would terminate at an existing paved path that leads to the Round Hill Pines public beach area. LTBMU, TRPA, and Douglas County support removing this short segment of trail because it terminates at US 50 in an undesirable location and does not continue further along the East Shore of Lake Tahoe. During several site visits in 2019, trail users were observed directly turning around at the US 50 terminus, instead of crossing the roadway. LTBMU, TRPA, and Douglas County have stated that a future Stateline-to-Stateline Bike trail project is in the planning stages and this future project will provide trail users with a safer US 50 crossing location.



Existing Stateline to Stateline Bike Trail terminus at US 50

The Code of Federal Regulations in 23 CFR 774 allows the FHWA to approve the use of a Section 4(f) property if “the Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact, as defined in §774.17, on the property.” A *de minimis* impact is one that, after taking into account any measures to

minimize harm, results in a determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). Per 23 CFR 774.5, coordination with others is required prior to making the *de minimis* impact determination. It is FHWA-CFLHD's intent to make a *de minimis* impact determination associated with the conversion of approximately 2.3 acres of open space located within the LTBMU Round Hill Pines Resort to a transportation use and the removal of a 549-foot segment of the Stateline-to-Stateline bike trail. The Proposed Project would not adversely affect the recreational attributes of the Round Hill Pines Resort or the Stateline-to-Stateline bike trail. The Round Hill Pines Resort will remain open and accessible during construction and no recreational attributes will be adversely affected by the Proposed Project. The loss of 549-linear feet of Stateline-Stateline bike trail would be minor in the context of the overall trail length. Recreational trail users would be able to get on the Stateline-to-Stateline bike trail at Laura Drive or Kahle Drive and access the Round Hill Pines Resort. The removed trail segment will be replaced by a future Stateline-to-Stateline bike trail project.

4.4 Avoidance, Minimization, and Mitigation Measures

The following measures have been incorporated into project design to reduce potential impacts to Section 4(f) properties:

- All areas beyond the construction limits will not be disturbed.
- Temporarily disturbed areas will be restored to pre-existing conditions. Degraded areas impacted from construction related activities will be reseeded with native plants under guidance from LTBMU staff.
- Access to the Round Hill Pines Resort, public beach areas, and the Stateline-to-Stateline Bike trail will be maintained throughout construction of the Proposed Project.

4.5 Agency Coordination

This project has been developed in coordination with LTBMU, TRPA, NDOT, and other local agency partners through scoping efforts, project design and environmental compliance reviews. As part of the EA process, there have been two public meetings held to discuss the purpose and need of the Proposed Project and the alternatives analysis. The public will have an opportunity to review the EA and FHWA's finding of a *de minimis* impact determination during the public comment period. The public can submit comments by utilizing the methods outlined in Chapter 1 of this EA document. Coordination with partner agencies is on-going and concurrence on FHWA's finding of a *de minimis* impact determination will be obtained prior to issuance of the decision document.

CHAPTER 5: PUBLIC INVOLVEMENT AND COORDINATION

5.1 Public Involvement

NEPA regulations and TRPA policy require public notification and scoping to determine the scope of the environmental analysis. The public scoping effort included a newsletter that was distributed to adjacent landowners, public agencies, and community groups in March 2019. The newsletter contained a general project overview, public meeting information, ways to be involved with the project development process, and contact information for CFLHD and LTBMU project staff. A public notice concerning the proposed project and public scoping meeting was advertised in the Tahoe Daily Tribute on April 5, 2019. A public scoping meeting was held at the USFS Lake Tahoe Basin Management Unit Office at 35 College Drive in South Lake Tahoe, CA on April 23, 2019. The public was introduced to a general project overview, the project team, existing conditions along US 50 and the Round Hill Pines Resort, and purpose and need for the project. Comments received at the public scoping meeting consisted of general support for improvements needed at the US 50 intersection, improved bike and pedestrian facilities along US 50, and general feedback on construction timeline and access during construction.

A second public meeting was held to discuss the Proposed Project and intersection alternatives. A newsletter was also distributed to adjacent landowners, public agencies, and community groups in August 2019 advertising the public meeting and the intersection alternatives. A public notice concerning the meeting was advertised in the Tahoe Daily Tribute and Reno Gazette Journal on September 7, 2019. The public meeting was held at the USFS Lake Tahoe Basin Management Unit Office at 35 College Drive in South Lake Tahoe, CA on September 25, 2019. The public was introduced to the intersection alternatives and participated in a question/answer session with members of the project team. Comments received at the public meeting consisted of preference on the intersection alternatives, general comments about the US 50 corridor and facilities at the Round Hill Pines Resort, and improved bike facilities.

Information on the Round Hill Pines Access Project may also be obtained at <https://highways.dot.gov/federal-lands/projects/nv/round-hill-pines> and includes information on how the public can get involved, when and where meetings and presentations can be scheduled, and availability of public meeting documents. Public meeting documents and comments received during the public meetings can be found in Appendix B.

5.2 Project Coordination

Correspondence with various federal, state, and local agencies and organizations occurred throughout project development. Correspondence is categorized by subject below.

5.2.1 Cultural Resources

A records search was conducted through the Nevada State Historic Preservation Office, Nevada Cultural Resources Information System (NVCRIS) by consultant staff prior to the field survey. Coordination with the LTBMU heritage resource staff was also conducted to gather additional information on the Round Hill Pines Resort. Nevada Department of Transportation cultural resources staff participated in reviewing the Architectural History and Archaeology Reports for the project and provided feedback. Native American consultation was conducted by FHWA-CFLHD and initiated consultation with the Washoe Tribe on July 6, 2020. Washoe Tribe Headquarters were invited to all public meetings for the project. FHWA-CFLHD is in the process of consulting with the Nevada SHPO regarding the area of potential effects, determinations of eligibility and finding of adverse effects.

5.2.2 Biological Resources

Consultation with USFWS began when an official species list was received through USFWS's Information for Planning and Consultation (IPaC) online system on May 29, 2019. Additional information on State of Nevada Protected Species, LTBMU sensitive species, TRPA special interest species was obtained on June 5th, 2019 and verified again on July 15, 2020. Coordination on the Biological Assessment/Biological Evaluation was conducted with LTBMU, TRPA and NDOT, which resulted in a determination of No Effect.

5.2.3 Noise Analysis

Coordination with TRPA and NDOT was initiated in September 2019 to review the Noise Analysis Report and discuss analysis methods to satisfy FHWA/NDOT noise regulation as well as TRPA noise policy.

5.2.4 Scenic Resources

Coordination with TRPA was initiated in September 2019 to discuss and select the viewpoints located within the project area that would require visual simulation. Several follow up meetings were scheduled with TRPA to discuss the visual simulations and the TRPA Code of Ordinances policy regarding scenic resources.

5.2.5 Hydrology/Water Quality

Coordination with TRPA, LTBMU, and NDOT on permanent BMPs for water quality was initiated on February 2, 2021 and will continue through the final design process.

5.2.6 Cumulative Effects

Coordination with TRPA, LTBMU, and NDOT on cumulative effects from adjacent projects was initiated in September 2019.

5.2.7 Section 4(f)

The Proposed Project would have impacts to resources identified as protected resources under Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303). In order to apply *de minimis* under Section 4(f) requires public involvement and agency coordination with the officials having jurisdiction over the Section 4(f) property. Coordination with the Douglas County and LTBMU is on-going and concurrence will be obtained prior to issuance of the decision document.

CHAPTER 6: LIST OF PREPARERS

This EA was developed by the Federal Highway Administration's Central Federal Lands Highway Division (CFLHD) and is the lead agency under the National Environmental Policy Act (NEPA). The following individuals; federal, state, and local agencies; tribes and non-agency persons contributed to the development of this EA.

Central Federal Lands Highway Division

- Lindsay Edgar, Environmental Protection Specialist
- Kelly Wade, Environmental Team Lead
- Ryan Mathis, Project Manager
- Thomas Sohn, PE, Former Project Manager
- Adrian Smith, Lead Design Engineer
- Christine Black, Safety Engineer
- Aaron Estep, Hydraulics Engineer
- James Arthurs, Geotechnical Engineer

U.S. Forest Service, Lake Tahoe Basin Management Unit

- Mike Gabor, PE, Staff Officer
- Michael Alexander, PE, Civil Engineer
- Ashley Sibr, Landscape Architect/Recreation Planner

Nevada Department of Transportation

- Sajid Sulahria, PE, Project Manager
- Devin Cartwright, Roadway Design
- Charles Creger, Cultural Resources Program Manager
- Jessica Goza-Tyner, Air Quality and Traffic Noise Analyst

Tahoe Regional Planning Agency

- Shannon Friedman, Senior Planner
- Nick Haven, Long Range Planning and Transportation Division Manager
- Michelle Glickert, Principal Transportation Planner

Tahoe Transportation District

- Danielle Hughes, Capital Program Manager

CHAPTER 7: REFERENCES

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Section 3.6 Earth Resources: Geology, Soils, Land Capability and Coverage

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APPENDIX A

Technical Studies

- Round Hill Pines Access - Traffic Signal Warrant Study
- Round Hill Pines Access – Intersection Design
- Biological Assessment/Biological Evaluation for the NV FLAP US 50(1) Round Hill Pines Access Project
- Traffic Noise Study for the NV FLAP US 50(1) Round Hill Pines Access Project
- Visual Impact Assessment for the NV FLAP US 50(1) Round Hill Pines Access Project



U.S. Department
of Transportation
Federal Highway
Administration

Memorandum

Subject: Traffic Signal Warrant Study
NV FLAP US50(1)
Round Hill Pines Access

Date: 6/27/19

From: Ryan Mathis
Lead Design Engineer
Lakewood, CO

To: Nevada Department of Transportation

A Signal Warrant Study was conducted for the proposed intersection of US-50 and the proposed Round Hill Pines Access Road in Douglas County. The subject project involves relocating the intersection of Round Hill Pines Access Road and US-50 north of the existing intersection. The existing access road is located within a horizontal curve and near the top of the hill, resulting in very poor sight distance for all traffic movements at this intersection. By relocating the intersection to the north, thus moving the access road onto a tangent section of US-50 and further away from the roadway crest, the sight distance is greatly improved.

Traffic Characteristics:

This proposed intersection signal warrant analysis is based on readily available traffic information; a separate traffic study was not conducted specific to this project.

Nevada Department of Transportation (NDOT) Traffic Records Information Access (TRINA) was utilized for US-50 traffic data. The nearest station with traffic data is located approximately 0.7 miles south of the proposed intersection, at the intersection of US-50 and Elks Point Road. Due to the close proximity and nature of the US-50 corridor and adjacent roadways, US-50 at the proposed intersection will have very similar traffic patterns and volumes. Using the data from this station is sufficient for this study. The station provides 24-hour approach volumes that are representative of average weekday conditions.

Traffic counts for the existing Round Hill Pines Access Road were provided with the FLAP application, with an estimated average daily traffic (ADT) of 1,000. Based on proposed parking availability (the Forest Service will be adding additional parking in the future) and accounting for a reasonable number of visitor drop offs, an estimated ADT of 1,200 (with an ADT of 600 for one direction) was established for project design and for this study. There is no hourly traffic information available for the access road and engineering judgement in conjunction with anecdotal information was utilized to conduct the warrant analysis.

For the purposes of this analysis, US-50 is considered the Major Street and the proposed Round Hill Pines Access Road is considered the Minor Street.

Intersection Characteristics:

The proposed intersection is a 3-way T-intersection with the Round Hill Pines Access Road stopping for US-50. The proposed Round Hill Pines Access Road provides access to the Round Hill Pines Beach Resort.

Roadway Characteristics:

Both the northbound and southbound approaches on US-50 have two through lanes. A northbound left turn lane would be added with the installation of a traffic signal. The proposed Round Hill Pines Access Road has one lane in each direction. The posted speed limit is 45 MPH on US-50 and 15 MPH on the proposed Round Hill Pines Access Road.

See the attached summary and supporting data for further information. If you have any questions or need additional information, please contact Ryan Mathis at 720-963-3728.

SUMMARY OF SIGNAL WARRANT ANALYSIS

6/27/19

US-50 @ Round Hill Pines Beach Resort

A Traffic Signal Warrant Study was conducted at the proposed intersection of US-50 and the Round Hill Pines Access Road in Douglas County. The data provided is indicative of an average weekday traffic pattern. The Major Street has a speed limit greater than 40 MPH; therefore, the volume warrants are 70% of the stated minimum vehicular volume requirements. The 2009 Manual on Uniform Traffic Control Devices details the traffic signal warrant analysis. Evaluation of data at this proposed intersection provided the following results.

WARRANT 1 – A

Description: This warrant is met when for each of any 8 hours of an average day, the total approach vehicle traffic for the Major Street exceeds 420 vehicles per hour (VPH), and the Minor Street approach vehicle traffic exceeds 105 VPH.

Analysis: The Major Street approach vehicle volume requirement was satisfied for 8 hours of the specified 8-hour period. However, the Minor Street approach vehicle volume requirement is not satisfied for 8 hours of the specified 8-hour period. The Minor Street average daily traffic was estimated at 600 vehicles per day in one direction. Even if all of the Minor Street traffic occurred in the specified 8-hour period, which is unlikely based on anecdotal information from the Forest Service, the average VPH is only 75 VPH, which is well below the necessary 105 VPH specified in Warrant 1-A. Based on the estimated Minor Street ADT of 600, on an average day there cannot be 8 hours where 105 VPH is exceeded. **Warrant 1-A is not met.**

-- OR --

WARRANT 1 – B

Description: This warrant is met when for each of any 8 hours of an average day, the total approach vehicle traffic for the Major Street exceeds 630 VPH and the Minor Street approach vehicle traffic exceeds 53 VPH.

Analysis: The Major Street approach vehicle volume requirement was satisfied for 8 hours of the specified 8-hour period. However, the Minor Street approach vehicle volume requirement is likely not satisfied for 8 hours of the specified 8-hour period. Hourly traffic data has not been completed for the existing Minor Street. The Minor Street average daily traffic was estimated at 600 vehicles per day in one direction. The Forest Service indicated that the majority of the traffic on the Minor Street occurs in the morning through the early afternoon. The majority of the traffic would occur in a 4 – 6 hour period and it is likely, based on the estimate one-way ADT of 600, that the 53 VPH would only be exceeded in some of these hours, and not for the necessary 8-hours. **Warrant 1-B is likely not met.**

WARRANT 1 IS LIKELY NOT MET

WARRANT 2

Description: This warrant is met when for each of any 4 hours of an average day, the Minor Street approach vehicle volume is above the appropriate curve on MUTCD Figure 4C-2.

Analysis: The Minor Street approach vehicle volumes are likely above the curve for any 4 hours of an average day. Based on anecdotal information from the Forest Service, most of the traffic on the Minor Street occurs in the morning through the early afternoon. In general, US-50 traffic volumes are between 850 – 1200 VPH during this time period, which, per MUTCD Figure 4C-2, would require a VPH of between 60 – 80 to be above the appropriate line. With an estimated ADT of 600 in one direction and knowing that the Minor Street traffic occurs mostly in a 4 – 6 hour time period, the Minor Street approach vehicle volume is likely above the appropriate curve on MUTCD Figure 4C-2 for 4 hours of an average day.

WARRANT 2 IS LIKELY MET

WARRANT 3

Description: The warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the Minor Street traffic suffers undue delay when entering or crossing the major street. The signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

Analysis: Based on anecdotal information from the Forest Service, on an average day there are no undue delays exceeding the minimum of 1 hour. Additionally, the resort the Minor Street provides access to does not attract and discharge large numbers of vehicles over a short time.

WARRANT 3 DOES NOT APPLY

WARRANT 4

Description: This warrant is met when the pedestrian volume crossing the Major Street at an intersection or mid-block during an average weekday is 75 or more for each hour any 4 hours or 93 or more during any 1 hour.

Analysis: While a formal study was not completed, zero pedestrians crossing the Major Street were observed during the 30% site visit and the Forest Service indicated that pedestrians do not cross the Major Street at this location. With a posted speed limit of 45 MPH and a lack of any facilities or businesses on the east side of the Major Street, it is not expected that any pedestrians would need to cross.

WARRANT 4 IS NOT MET

WARRANT 5

Description: This warrant is met when at an established school crossing across the Major Street, the number of adequate gaps in the vehicle traffic stream during the period when schoolchildren are using the crossing is less than the number of minutes in the same period and there is a minimum of 20 schoolchildren during the highest crossing hour.

Analysis: There are no established school crossings within the project limits.

WARRANT 5 DOES NOT APPLY

WARRANT 6

Description: This warrant is met when progressive movement control is needed on a two-way street where adjacent traffic signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

Analysis: There are no traffic signals that would be adjacent to the proposed signal discussed in this analysis. The nearest traffic signals are over a half mile in either direction on US-50.

WARRANT 6 DOES NOT APPLY

WARRANT 7

Description: This warrant is satisfied when five or more reported crashes, of types susceptible to correction by traffic control signal, have occurred in a consecutive 12-month period.

Analysis: NDOT's website has an application with crash data from 2015-2017. From this data, there are no consecutive 12-month periods with five or more reported crashes within the project limits.

WARRANT 7 IS NOT MET

WARRANT 8

Description: This warrant is met when the common intersection of two or more major routes (1) have a total existing or projected entering volume of at least 1,000 vehicles during the peak hour of a typical weekday; or (2) has a total existing or projected entering volume of at least 1,000 vehicles for each of any 5 hours of a Saturday and/or Sunday.

Analysis: The proposed location is not an intersection of two major routes.

WARRANT 8 DOES NOT APPLY

WARRANT 9

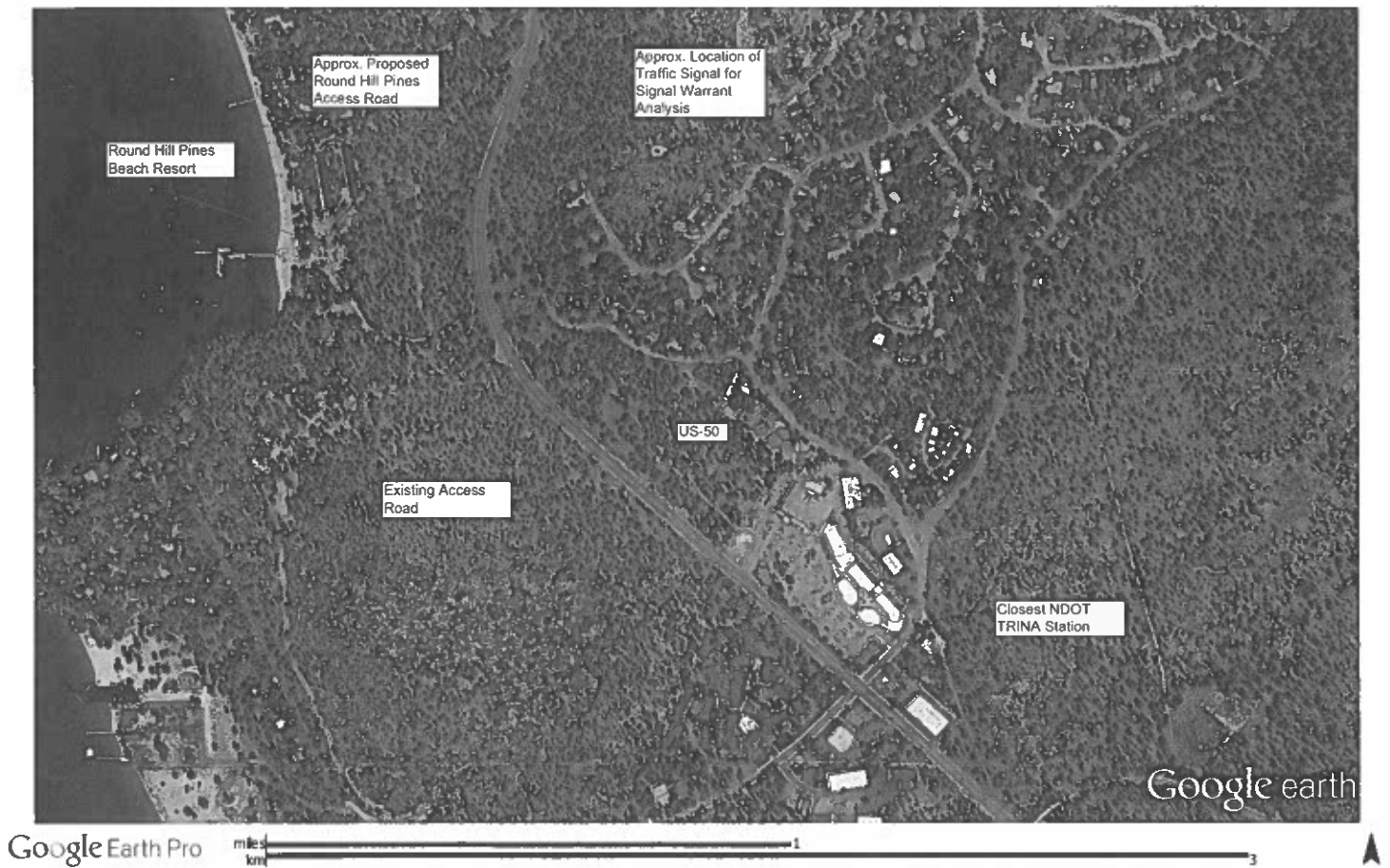
Description: This warrant is met when the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

Analysis: There is no grade crossing within the project limits.

WARRANT 9 DOES NOT APPLY

CONCLUSION

This signal warrant analysis indicates that a traffic signal installation may not be justified at the proposed intersection based on only likely meeting 1 warrant (Warrant 2). A traffic study may be required to prove that this warrant is met. Per the MUTCD, the satisfaction of a traffic signal warrant or warrants shall not itself require the installation of a traffic control signal.



Nevada Department of Transportation

Daily Volume from 05/14/2018 through 05/17/2018

Site Names: 0050038, , , US50
 County: Douglas
 Funct. Class: Rural Principal Arterial - Other
 Location: .72 mi E of SR760 (Elk Point Rd)

Seasonal Factor Group: 02
 Daily Factor Group: 02
 Axle Factor Group: 03
 Growth Factor Group: 03

	Sun 05/13/2018			Mon 05/14/2018			Tue 05/15/2018			Wed 05/16/2018			Thu 05/17/2018			Fri 05/18/2018			Sat 05/19/2018		
	ROAD	W	E	ROAD	W	E	ROAD	W	E	ROAD	W	E	ROAD	W	E	ROAD	W	E	ROAD	W	E
00:00							66	31	35	65	34	31	66	38	28						
01:00							48	26	22	46	23	23	60	32	28						
02:00							30	12	18	35	12	23	35	12	23						
03:00							42	15	27	29	8	21	30	12	18						
04:00							60	36	24	63	19	44	64	26	38						
05:00							215	128	87	194	103	91	205	111	94						
06:00							529	284	245	553	302	251	540	290	250						
07:00							863	456	407	869	433	436	899	441	458						
08:00							859	432	427	834	399	435	939	462	477						
09:00							884	400	484	882	379	503	955	434	521						
10:00				965	447	518	955	409	546	853	332	521	1,005	443	562						
11:00				967	456	511	965	442	523	981	448	533	1,066	484	582						
12:00				1,021	483	538	1,020	500	520	1,005	473	532	1,172	598	574						
13:00				981	514	467	999	512	487	981	493	488	1,098	593	505						
14:00				1,087	582	505	1,123	552	571	970	517	453	1,211	638	573						
15:00				1,327	698	629	1,294	665	629	1,074	518	556	1,288	704	584						
16:00				1,153	574	579	1,264	622	642	1,048	520	528	1,293	635	658						
17:00				1,016	524	492	1,100	473	627	933	502	431									
18:00				768	398	370	704	382	322	672	366	306									
19:00				477	260	217	528	275	253	483	263	220									
20:00				414	238	176	407	244	163	329	199	130									
21:00				249	147	102	316	215	101	302	178	124									
22:00				179	102	77	205	125	80	171	89	82									
23:00				87	43	44	110	60	50	110	59	51									
Volume				10,691	5,466	5,225	14,586	7,296	7,290	13,482	6,669	6,813	11,926	5,953	5,973						
AM Peak Vol							1,007	458	570	989	448	550	1,089	494	617						
AM Peak Fct							0.93	0.92	0.89	0.95	0.97	0.96	0.86	0.90	0.89						
AM Peak Hr							10:30	7:15	10:30	10:45	11:00	10:15	10:45	8:30	10:45						
PM Peak Vol				1,339	709	630	1,299	668	668	1,123	569	566									
PM Peak Fct				0.95	0.93	0.98	0.97	0.93	0.93	0.93	0.88	0.93									
PM Peak Hr				15:15	15:15	15:15	15:15	15:15	16:30	15:30	15:15	15:30									
Seasonal Fct				0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974	0.974						
Daily Fct				1.028	1.028	1.028	0.918	0.918	0.918	0.908	0.908	0.908	0.886	0.886	0.886						
Axle Fct				0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500						
Pulse Fct				2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

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ROAD AADT 13,033

W AADT 6,550

E AADT 6,482

DV03 Page 1 of 1



Memorandum

Subject: NV FLAP US50(1)
Round Hill Pines Access Intersection
Design

Date: 2/5/20

From: Thomas Sohn
Project Manager
Central Federal Lands Highway Division

To: Nevada Department of Transportation
Tahoe Regional Planning Agency
United States Forest Service

The purpose of this memo is to outline the process and procedures used to evaluate three proposed alternatives requested by the Tahoe Regional Planning Agency's (TRPA) Memorandum dated October 16, 2019.

Background

The existing entrance to the Round Hill Pines Resort from US 50 has safety concerns due to poor sight distance, lack of turn lanes, and acceleration/deceleration lanes. Poor sight distance is due to the existing intersection being located within a horizontal curve and a vertical crest just south of the intersection. Additionally, the existing entrance road has an inconsistent width that cannot allow for two-way traffic in certain locations, as well as sharp curves.

The existing conditions, information from the 2017 Nevada Federal Lands Access Program (NV FLAP) application, other supporting documents, and the project scoping process resulted in a Purpose and Need statement for the project (Appendix F). Central Federal Lands Highway Division (CFLHD) and the project partners determined that the purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from US 50. The purpose and need statement for the project was presented during a public meeting on April 23, 2019. Feedback received during the public meeting was positive and attendees were supportive of the project.

CFLHD and the project partners determined that the existing entrance into the Round Hill Pines Resort should be relocated to the north to a tangent section of US 50. This location provides better sight distance conditions and allows for construction of a new entrance road to tie into a future United States Forest Service (USFS) project that includes new parking lots at the resort. Additionally, the project team discussed safety improvements to US 50. These discussions included widening US 50 to accommodate a northbound left turn lane onto the proposed entrance road with a northbound acceleration lane for those turning left onto US 50 from the new entrance road and widening US 50 to accommodate a southbound right turn lane onto the proposed entrance

road and a southbound acceleration lane for those turning right onto US 50 from the new entrance road. The configuration for this layout and lane/taper values were taken from the NDOT Access Management System and Standards, Figure 4-10 (Appendix E).

For the 30% design phase, CFLHD provided plans, an estimate, and supporting documentation for the design described above; relocation of the existing entrance road and widening of US 50 at the intersection. At the 30% review meeting, the TRPA expressed concern about the widening and associated impacts. These concerns have been documented and elaborated on in comment response forms and during review meetings.

Based on this feedback, two additional alternatives were analyzed. A preliminary roundabout design and a traffic signal warrant analysis/design was conducted and presented to the project partners in July 2019. All three alternatives were presented during a public meeting on September 25, 2019. The roundabout and traffic signal alternatives were considered but dismissed from further evaluation because:

- Roundabout alternative had more environmental impact compared to the 30% design alternative.
- This intersection did not meet the traffic signal warrant.

In October 2019, in a memorandum prepared by TRPA (Appendix G), it was requested that additional alternatives be considered and analyzed. These alternatives are:

1. Moving the location of the entrance road to improve sight distance with no widening on US 50.
2. Moving the location of the entrance road to improve sight distance and only widening US 50 to include a northbound left turn lane onto the proposed entrance road with a northbound acceleration lane for those turning left onto US 50 from the new entrance road.

Intersection Sight Distance

The existing intersection was analyzed for left turn intersection sight distance. Based on existing conditions, the required sight distance is 588 ft. for passenger vehicles. For vehicles turning left onto US 50 from the existing entrance road, the existing sight distance to the north is approx. 760 ft., but only 310 ft. to the south (due to the location of a crest vertical curve). Therefore, the existing configuration has insufficient sight distance to the south and is an unsafe condition.

For the proposed design, the entrance road was relocated to the north within a tangent section of US 50. The exact location was selected such that intersection sight distance is maximized and evenly distributed. By moving the entrance road, an increased sight distance of approx. 665 ft. is achieved in both directions, which is sufficient for passenger cars. Because of the improved sight distance to a level that exceeds the minimum, the relocation of the entrance road is justified.

Displays showing the intersection sight distance are included in Appendix A.

Interactive Highway Safety Design Model Analysis

The Interactive Highway Safety Design Model (IHSDM) is a software analysis tool used to evaluate the safety and operational effects of geometric design decisions on highways. The software allows the user to import roadway geometry and assign attributes (such as lane widths, traffic data, turn lanes, etc.) for analysis. With this information, the software applies crash reduction factors (CRFs) and predicts total number and types of crashes for a specified time range.

For this analysis, three separate alternatives were analyzed: (1) moving the entrance road north with no widening on US 50, (2) moving the entrance road north and widening US 50 to include a left turn and acceleration lane, and (3) moving the entrance road north and widening US 50 to include a left turn and right turn lane as well as acceleration lanes in both directions (the 30% design). The results are available in Appendix B and summarized in the table below:

Table 1: IHSDM Results

Alternative	Crash Reduction by Crash Type (for years 2020-2036)			
	Total	Fatal/Injury	Property Damage Only	Located at Intersection
(1) Move Intersection ONLY ¹	-	-	-	-
(2) Add Left Turn/Accel ONLY	11.5%	14.1%	10.3%	33.0%
(3) 30% Design	14.8%	18.1%	13.2%	42.4%

¹ The “Move Intersection ONLY” alternative is considered the base alternative for this analysis. The crash reduction columns show the percent decrease in crash type from the base.

These results are based on the three alternatives, but with the following software limitations:

1. The software does not take intersection sight distance into account, therefore the existing condition is not any different than the “move intersection only” alternative in IHSDM. The previous section of this memo provides justification for moving the intersection despite the software not being able to account for improved sight distance. For the purposes of this analysis, the move intersection only alternative will be considered the base alternative.
2. There is not enough existing data available for acceleration lanes to apply a CRF, so the software does not account for acceleration lanes in its analysis. Research has shown that acceleration lanes at intersections function effectively and do not create safety problems, but there isn’t enough information to quantify what the expected safety impact would be. Alternatives (2) and (3) add one and two acceleration lanes, respectively. It is likely the actual number of crashes will be lower than the results presented in the IHSDM analysis due to the addition of acceleration lanes.
3. The software has an option to include a local calibration factor, as different designs can be more/less effective in different areas. There was not a local calibration factor available for this region.

Keeping the limitations described above in mind, the results from the software show a significant reduction in crashes by adding a left turn lane. This is supported by a 2017 publication by NDOT

(Appendix C), which shows, based on DOT state-wide reported crash data, the most common vehicle actions for fatal and serious injury crashes are going straight or turning left. Adding the left turn lane will help mitigate the safety issues of this intersection.

On the Federal Highway Administration Proven Safety Countermeasures website (Appendix D), it is shown that the benefit of left turn lanes is typically higher than for right turn lanes. This is supported by the IHSDM results, which show a significant reduction in crashes between alternatives (1) and (2), with a smaller reduction in crashes between alternative (2) and (3). Installing a right turn lane does have safety benefits, but they are less significant than those gained from adding a left turn lane.

In addition to safety, some other important factors for the proposed alternatives are summarized in the table below.

Table 2: Proposed Alternatives Comparison

Alternative	Length of Project on US 50 (ft)	US 50 Project Impervious Area (acre)	US 50 Pavement Width (ft)	Cost Estimate
(1) Move Intersection ONLY	N/A	3.0	56	\$2.2M - \$2.7M
(2) Add Left Turn/Accel ONLY	2210	3.5	72	\$3.7M - \$4.2M
(3) 30% Design	2420	4.8	84	\$4.8M

Alternative 3 would be a slightly longer project with more impervious area/impacts and a higher cost estimate due to the additional acceleration/deceleration lane.

Pavement Width

In the TRPA memo, it was also requested to restripe through lanes to 11 feet and reduce shoulder width to 2 feet. The AASHTO Green Book states in Section 7.3.3 that 12 foot lanes are desirable on high-speed, free-flowing, principal arterials such as US 50. Additionally, in Section 2.2.6 of the Green Book, when discussing driver expectancy, it is stated that design elements should be applied consistently throughout a highway segment and from one segment to another. Existing US 50 has 12 foot through lanes with an approximate 4 foot west shoulder and 6 foot east shoulder. Reducing the through lanes and shoulders for a relatively short stretch of the corridor would not provide consistency, would violate drivers' expectations, and would likely decrease the safety benefits presented above.

This is further supported by the Nevada DOT Design Manual (see excerpts in Appendix H). Section 3.6 of the manual states that through lanes and auxiliary lanes should be 12 feet wide. This does allow for a reduction of the median left turn bay/acceleration lane from 14 feet (as seen in the 30% design and used in the IHSDM analysis) to 12 feet. This would decrease the US 50 pavement width for Alternative 2, shown above in Table 2, to 70 feet. Additionally, Section 3.7 of the Nevada

DOT Design Manual states that on National Highway System (NHS) routes, which US 50 is, NDOT prefers a 4 foot inside shoulder and 8 foot outside shoulder. The current design incorporates both 4 and 6 foot outside shoulders, already below the preference of the department, to match existing conditions. The proposed design also matches the existing centerline in order to keep the solid double yellow striping on the roadway crown. Shifting the proposed centerline east to reduce the shoulder width from 6 feet to 4 feet (thus reducing overall impacts) was briefly discussed and quickly dismissed, as this would place the roadway crown within the wheel path, creating a new safety concern.

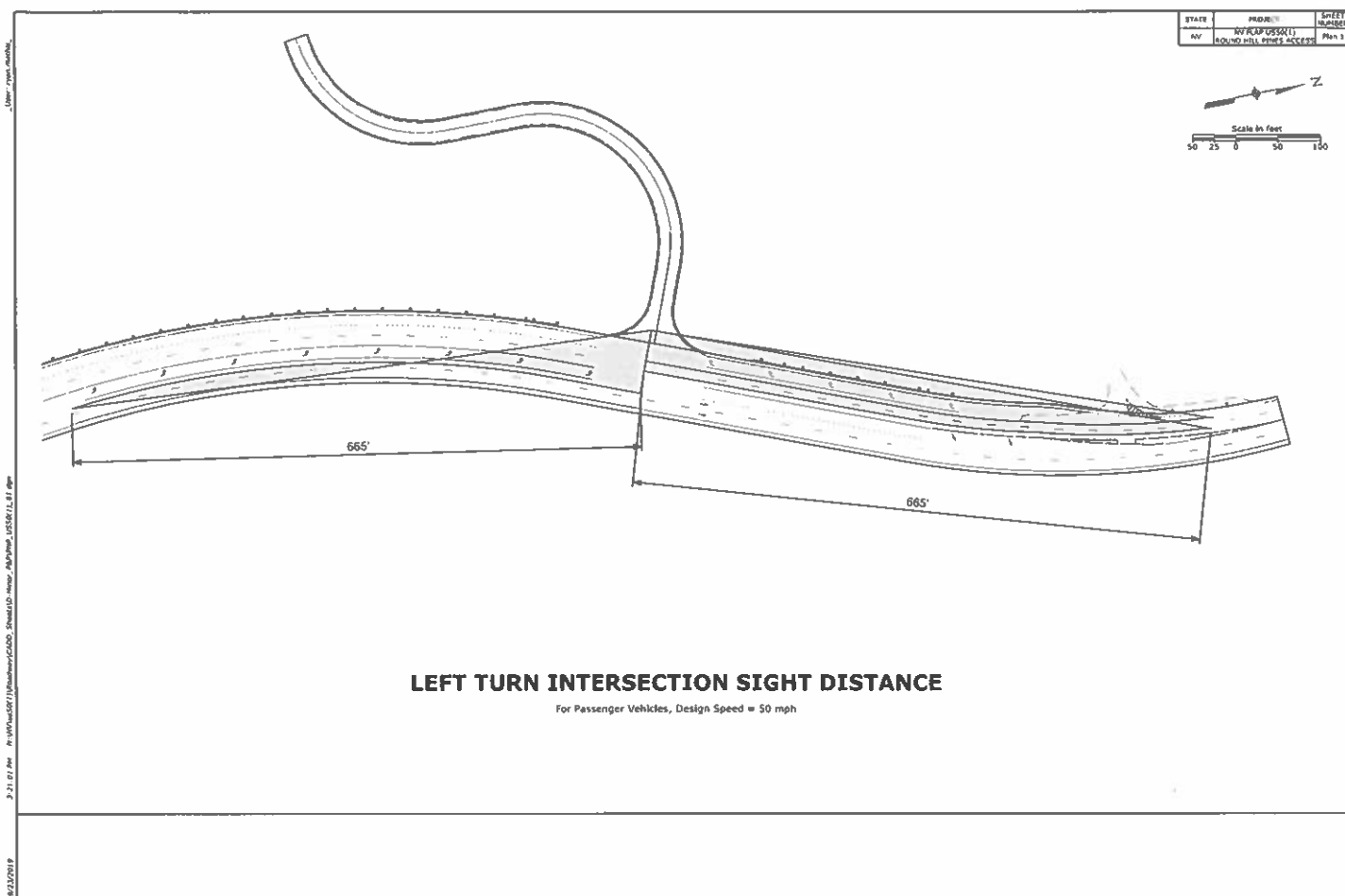
Conclusion

Moving the intersection to the north significantly improves sight distance from the existing condition and is justified. Additionally, the new entrance road improves access for cyclists, as the proposed road has less sharp turns, will provide a better surface to ride on, and a wider, consistent roadway (without precluding a future bike lane project on US 50). However, Alternative 1 (moving the intersection with no widening) is not recommended because it does not adequately address existing safety concerns, such as lack of left turn lane and left-turn acceleration lane. There are clear and significant safety benefits by providing additional turn lanes as proposed in Alternative 2. Therefore, it is CFLHD's opinion that safety benefits gained by improved sight distance alone are not significant enough to recommend Alternative 1.

While Alternative 3 (the design presented at 30%) shows the largest reduction in crashes by the IHSDM analysis, the safety improvements of adding the additional accel/decel lane from Alternative 2 are incremental and outweighed by other factors. Compared to Alternative 2, there are more project impacts due to a longer length of project, increased impervious area (and the associated pavement width), and wider construction limits (resulting in more tree removals). With the project located in a sensitive and scenic area, project partners have stressed the importance of minimizing project impacts with context sensitive design solutions. Additionally, it has been noted that while there are multiple locations of 5 lanes of pavement on US 50 within a few miles of the project area, there are no other locations of 6 lanes of pavement on US 50 near the project area. TRPA expressed their concern that the Alternative 3 design would be compromising the character of the corridor by adding a section with an extra lane of pavement wider than anywhere else.

CFLHD recommends Alternative 2 (relocation of the entrance road to the north and providing a northbound left turn lane and northbound acceleration lane along US 50) for this project going forward. It is also recommended that through lanes remain 12 feet wide, the median left turn bay/acceleration lane be reduced to 12 feet wide (from 14 feet), and the shoulders remain 4 feet (west) and 6 feet wide (east) to match existing widths. Through different analyses presented in this memo, this alternative provides significant safety benefits while maintaining the character of the existing US 50 corridor and reduced environmental impacts from the 30% design alternative.

Appendix A – Intersection Sight Distance Displays



Appendix B – IHSDM Results

Alt1 Predicted Highway Crash Rates and Frequencies Summary

First Year of Analysis	2020
Last Year of Analysis	2036
Evaluated Length (mi)	0.5166
Average Future Road AADT (vpd)	23,384
Predicted Crashes	
Total Crashes	94.52
Fatal and Injury Crashes	31.62
Property-Damage-Only Crashes	62.9
Percent of Total Predicted Crashes	
Percent Fatal and Injury Crashes (%)	33
Percent Property-Damage-Only Crashes (%)	67
Predicted Crash Rate	
Crash Rate (crashes/mi/yr)	10.7629
FI Crash Rate (crashes/mi/yr)	3.6006
PDO Crash Rate (crashes/mi/yr)	7.1623
Predicted Travel Crash Rate	
Total Travel (million veh-mi)	74.95
Travel Crash Rate (crashes/million veh-mi)	1.26
Travel FI Crash Rate (crashes/million veh-mi)	0.42
Travel PDO Crash Rate (crashes/million veh-mi)	0.84

Alt2 Predicted Highway Crash Rates and Frequencies Summary

First Year of Analysis	2020
Last Year of Analysis	2036
Evaluated Length (mi)	0.5166
Average Future Road AADT (vpd)	23,384
Predicted Crashes	
Total Crashes	83.62
Fatal and Injury Crashes	27.17
Property-Damage-Only Crashes	56.45
Percent of Total Predicted Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Predicted Crash Rate	
Crash Rate (crashes/mi/yr)	9.5225
FI Crash Rate (crashes/mi/yr)	3.0937
PDO Crash Rate (crashes/mi/yr)	6.4288
Predicted Travel Crash Rate	
Total Travel (million veh-mi)	74.95
Travel Crash Rate (crashes/million veh-mi)	1.12
Travel FI Crash Rate (crashes/million veh-mi)	0.36
Travel PDO Crash Rate (crashes/million veh-mi)	0.75

Alt3 Predicted Highway Crash Rates and Frequencies Summary

First Year of Analysis	2020
Last Year of Analysis	2036
Evaluated Length (mi)	0.5166
Average Future Road AADT (vpd)	23,384
Predicted Crashes	
Total Crashes	80.53
Fatal and Injury Crashes	25.9
Property-Damage-Only Crashes	54.62
Percent of Total Predicted Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Predicted Crash Rate	
Crash Rate (crashes/mi/yr)	9.1699
FI Crash Rate (crashes/mi/yr)	2.9496
PDO Crash Rate (crashes/mi/yr)	6.2203
Predicted Travel Crash Rate	
Total Travel (million veh-mi)	74.95
Travel Crash Rate (crashes/million veh-mi)	1.07
Travel FI Crash Rate (crashes/million veh-mi)	0.35
Travel PDO Crash Rate (crashes/million veh-mi)	0.73

Alt 1 Predicted Crash Frequencies and Rates by Highway Segment/Intersection

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Crash Rate (crashes/mi/yr)	Predicted Travel Crash Rate (crashes/million veh-mi)	Predicted Intersection Travel Crash Rate (crashes/million veh)
1	10+00.000	12+55.363	0.0484	5.759	0.3387	0.0999	0.2389	7.004	0.82	
2	12+55.363	26+62.450	0.2665	31.731	1.8665	0.5502	1.3163	7.004	0.82	
3	26+62.450	30+80.498	0.0792	9.427	0.5545	0.1635	0.3911	7.004	0.82	
US 50 Access Road Alt1	27+66.620			33.009	1.9417	0.7934	1.1483			0.22
4	30+80.498	36+88.788	0.1152	13.717	0.8069	0.2378	0.5691	7.004	0.82	
5	36+88.788	37+27.459	0.0073	0.872	0.0513	0.0151	0.0362	7.004	0.82	
All Segments			0.5166	61.506	3.618	1.0665	2.5515	7.004	0.82	
All Intersections				33.009	1.9417	0.7934	1.1483			0.22
Total			0.5166	94.515	5.5597	1.8599	3.6998	10.7629		

Alt 2 Predicted Crash Frequencies and Rates by Highway Segment/Intersection

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Crash Rate (crashes/mi/yr)	Predicted Travel Crash Rate (crashes/million veh-mi)	Predicted Intersection Travel Crash Rate (crashes/million veh)
1	10+00.000	12+55.363	0.0484	5.759	0.3387	0.0999	0.2389	7.004	0.82	
2	12+55.363	20+66.620	0.1536	18.294	1.0761	0.3172	0.7589	7.004	0.82	
3	20+66.620	26+62.450	0.1128	13.436	0.7904	0.233	0.5574	7.004	0.82	
4	26+62.450	27+66.620	0.0197	2.349	0.1382	0.0407	0.0975	7.004	0.82	
US 50 Access Road Alt2	27+66.620			22.116	1.301	0.5316	0.7693			0.15
5	27+66.620	30+80.498	0.0594	7.078	0.4164	0.1227	0.2936	7.004	0.82	
6	30+80.498	36+88.788	0.1152	13.717	0.8069	0.2378	0.5691	7.004	0.82	
7	36+88.788	37+27.459	0.0073	0.872	0.0513	0.0151	0.0362	7.004	0.82	
All Segments			0.5166	61.506	3.618	1.0665	2.5515	7.004	0.82	
All Intersections				22.116	1.301	0.5316	0.7693			0.15
Total			0.5166	83.622	4.919	1.5981	3.3209	9.5225		

Alt 3 Predicted Crash Frequencies and Rates by Highway Segment/Intersection

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Crash Rate (crashes/mi/yr)	Predicted Travel Crash Rate (crashes/million veh-mi)	Predicted Intersection Travel Crash Rate (crashes/million veh)
1	10+00.000	12+55.363	0.0484	5.759	0.3387	0.0999	0.2389	7.004	0.82	
2	12+55.363	20+66.620	0.1536	18.294	1.0761	0.3172	0.7589	7.004	0.82	
3	20+66.620	26+62.450	0.1128	13.436	0.7904	0.233	0.5574	7.004	0.82	
4	26+62.450	27+66.620	0.0197	2.349	0.1382	0.0407	0.0975	7.004	0.82	
US 50 Access Road Alt3	27+66.620			19.02	1.1188	0.4572	0.6616			0.13
5	27+66.620	30+80.498	0.0594	7.078	0.4164	0.1227	0.2936	7.004	0.82	
6	30+80.498	36+88.788	0.1152	13.717	0.8069	0.2378	0.5691	7.004	0.82	
7	36+88.788	37+27.459	0.0073	0.872	0.0513	0.0151	0.0362	7.004	0.82	
All Segments			0.5166	61.506	3.618	1.0665	2.5515	7.004	0.82	
All Intersections				19.02	1.1188	0.4572	0.6616			0.13
Total			0.5166	80.526	4.7368	1.5237	3.2132	9.1699		

Appendix C – NDOT Intersections Fact Sheet

NEVADA Strategic Highway Safety Plan

Zero
Fatalities
Drive Safe Nevada



Always Buckle Up



Don't Drive Impaired



Focus on the Road



Stop on Red



Be Pedestrian Safe



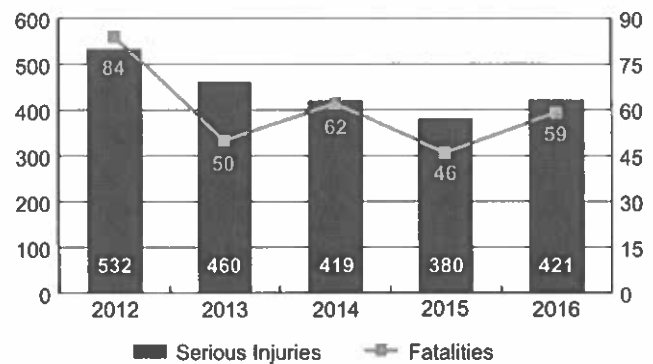
Ride Safe



NEVADA'S INTERSECTION SAFETY PROBLEM

Between 2012 and 2016, 301 people lost their lives and a staggering 2,212 were seriously injured in intersection-related crashes on Nevada roadways.

The goal of the Nevada Strategic Highway Safety Plan (SHSP) is to reach zero fatalities. This fact sheet provides information on who is involved in intersection-related fatal and serious injury crashes, where and when these crashes occurred, and why they happened. It also outlines how the State plans to reduce intersection-related fatalities and serious injuries.

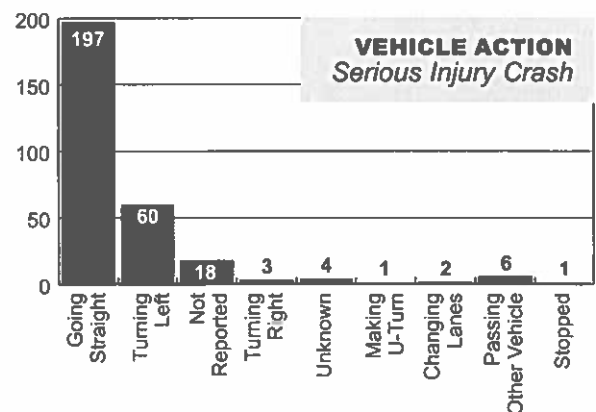
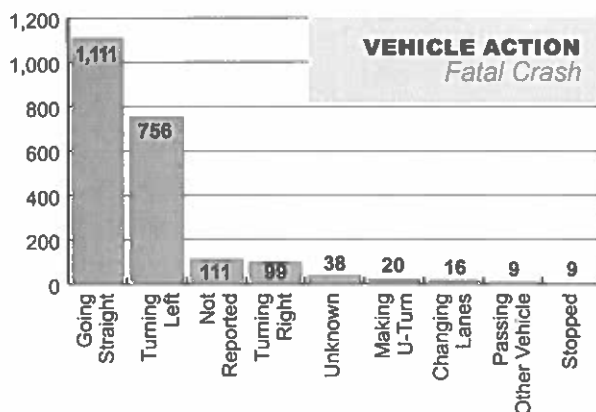
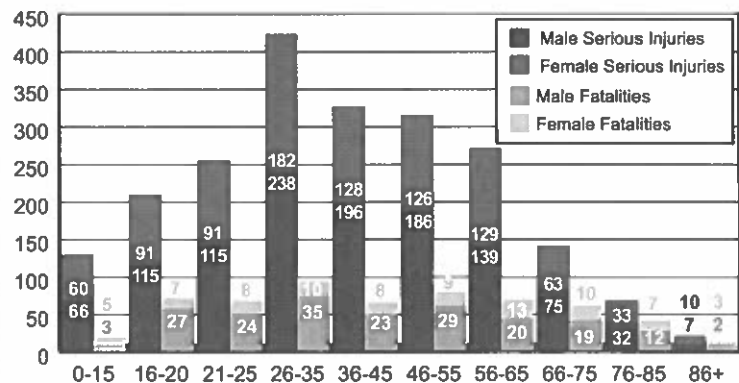


WHO?

Male drivers aged 26 to 35 years old are involved in most intersection-related fatalities and serious injuries.

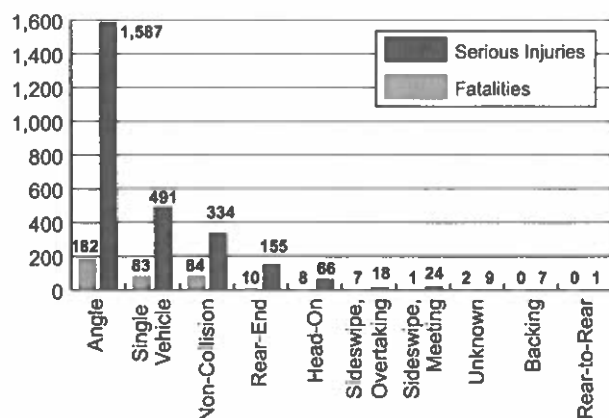
WHERE?

Between 2012 and 2016, three-quarters (75 percent) of the intersection-related fatalities and serious injuries occurred in Clark County.



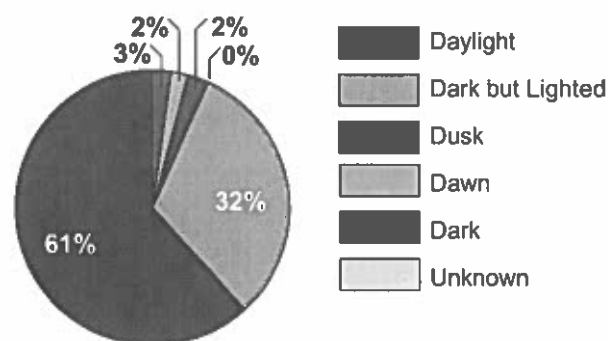
WHY?

Most of the intersection-related fatalities and serious injuries involve angle crashes followed by single vehicle crashes.



WHEN?

Most of the intersection-related fatalities and serious injuries occurred during daylight hours (61 percent) and 32 percent occurred in dark but lighted conditions.



HOW DO WE REACH OUR GOAL?

CRITICAL STRATEGIES TO REDUCE INTERSECTION FATALITIES

The Nevada SHSP identified several strategies that have the greatest potential to reduce intersection fatalities and serious injury crashes. By focusing on these strategies we can begin to reduce the terrible toll caused by intersection fatalities.

Implement geometric improvements:

- » Develop a systemic intersection safety improvement program.
- » Improve safety through design standard improvements.

Use appropriate traffic controls to reduce conflicts:

- » Use Intersection Control Evaluations (ICE) to determine appropriate traffic control at intersections.
- » Educate other NDOT and local agency employees of the benefits of roundabouts.
- » Install Flashing Yellow Arrows (FYAs) at traffic signals with protected permissive phasing.

Improve sight distance and traffic control visibility:

- » Install retroreflective backplates at traffic signals.

Improve access management to reduce conflicts:

- » Update NDOT Access Management Manual.
- » Implement access management guidelines at the state and local level.

Improve behavior at intersections through the use of education and enforcement:

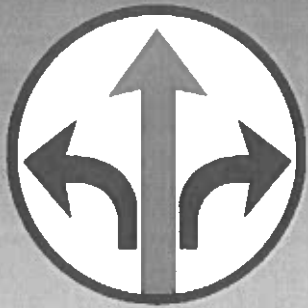
- » Educate the public on the benefits of roundabouts through a roundabout Public Relations (PR) campaign.

Appendix D – FHWA Proven Safety Countermeasures



U.S. Department of Transportation
Federal Highway Administration

PROVEN SAFETY COUNTERMEASURES



Left and Right Turn Lanes at Two-Way Stop-Controlled Intersections

SAFETY BENEFITS:

LEFT-TURN LANES

28-48%

Reduction in total crashes

RIGHT-TURN LANES

14-26%

Reduction in total crashes



Source: Highway Safety Manual

Auxiliary turn lanes—either for left turns or right turns—provide physical separation between turning traffic that is slowing or stopped and adjacent through traffic at approaches to intersections. Turn lanes can be designed to provide for deceleration prior to a turn, as well as for storage of vehicles that are stopped and waiting for the opportunity to complete a turn.



Example of left-turn lanes.

Source: FHWA

While turn lanes provide measurable safety and operational benefits at many types of intersections, they are particularly helpful at two-way stop-controlled intersections. Crashes occurring at these intersections are often related to turning maneuvers. Since the major route traffic is free flowing and typically travels at higher speeds, crashes that do occur are often severe. The main crash types include collisions of vehicles turning left across opposing through traffic and rear-end collisions of vehicles turning left or right with other vehicles following closely behind. Turn lanes reduce the potential for these types of crashes.

Installing left-turn lanes and/or right-turn lanes should be considered for the major road approaches for improving safety at both three- and four-leg intersections with two-way stop control on the minor road, where significant turning volumes exist, or where there is a history of turn-related crashes. Pedestrian and bicyclist safety and convenience should also be considered when adding turn lanes at an intersection.



Example of a right-turn lane.

Source: FHWA

→ For more information on this and other FHWA Proven Safety Countermeasures, please visit <https://safety.fhwa.dot.gov/provencountermeasures>.

FHWA-SA-17-053

Safe Roads for a Safer Future
Investment in roadway safety saves lives
<http://safety.fhwa.dot.gov>

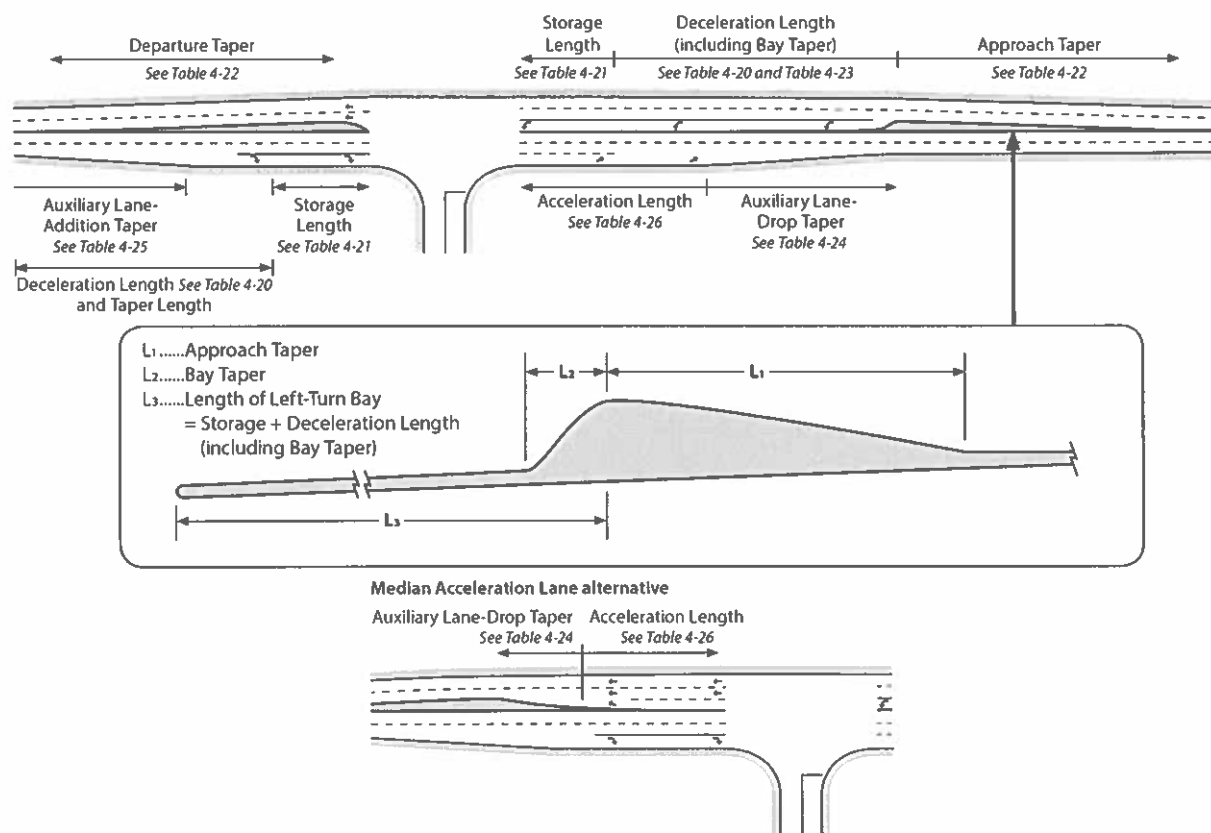
Appendix E – Elements of an Intersection

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Chapter Four: Design Standards and Specifications

Figure 4-10: Elements of an Intersection



Appendix F – Purpose and Need Statement

The purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County, Nevada.

The project is needed because the current US 50 entrance configuration into the Round Hill Pines Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50. In addition to the current configuration, the Round Hill Pines Resort access road contains a narrow roadway width, steep grades, and sharp curves. This limits the flow for two-way traffic containing transit and recreational vehicles. The specific needs driving the project are discussed in further details below.

- The existing Resort access road is located at the crest of a vertical curve along US 50, which results in limited sight distance for both travel directions. Sight distance for passenger vehicles south of the existing Resort access road is below the recommended AASHTO sight distance values. This substandard sight distance measurement presents a safety hazard for vehicles exiting the Resort and turning north onto eastbound US 50, as well as eastbound US 50 traffic.
- During the peak season, eastbound US 50 experiences vehicle queuing and congestion in the inside lane. This is caused by Resort visitors making unprotected turning movements across westbound US 50 onto the access road.
- The existing access road is narrow with sharp turns and a steep grade, which limits two-way traffic and access for larger vehicles such as; recreation vehicles, transit, and trailers.

Objectives for the project includes the following:

- Align the Round Hill Pines Beach and Resort functions with the LTBMU's long term vision for the area.
- Improve alternate transportation options into RHPR such as bike, pedestrians, and transit.
- Minimize environmental and scenic quality impacts.
- Construct permanent water quality improvements to reduce sedimentation and runoff into the Lake Tahoe basin.

References:

NV FLAP application 2017 and supporting documentation

NDOT Roadside Safety Audit December 2016

NDOT Roadside Safety Audit October 2013

FHWA CFLHD, Scoping Report August 2018

FLAP Project Memorandum of Agreement July 2018

Appendix G – TRPA Memo



**TAHOE
REGIONAL
PLANNING
AGENCY**

TRANSPORTATION

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
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MEMORANDUM

DATE: 10/16/19
TO: FHWA Central Federal Lands & Round Hill Pines Project Team
FROM: TRPA TMPO
RE: Round Hill Pines Intersection Design

Background:

The Round Hill Pines Access Project is an important project aimed at increasing the safety and improving accessibility for motorists, pedestrians, and bicycles entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US50) in Douglas County, Nevada. The Tahoe Regional Planning Agency (TRPA) has been working with the Federal Highway Administration – Central Federal Lands (FHWA-CFL), Nevada Department of Transportation (NDOT), and the US Forest Service (USFS) to identify improvements to the resort access for near term implementation. The current conceptual designs from the FHWA-CFL design team propose increasing the roadway width from 48-feet to 84-feet (including shoulders of 4-feet (west side) and 12-feet (east side), with additional impact outside of the roadway including tree removal, grading and scenic impacts. The conceptual designs follow NDOT freeway design standards for vehicle acceleration/deceleration, traveled way, median turn bays and shoulders which is out of character with this section of road which is mountain/forest and not a freeway.

The TRPA, as a project partner, has participated in project design meetings and provided comments on the alternatives analysis and conceptual designs. Previous TRPA comments and concerns have been expressed to the project team regarding consistency with TRPA policies. Some of those comments focused on the entrance design, which widens the roadway significantly and is out of character with the US 50 corridor in Douglas County, does not provide for safe bicycle access and does not include elements that slow vehicles down. The comments provided reflect the regulatory requirements of the TRPA, which is charged by the 1980 Bi-State Compact (P.L. 96-551) to achieve environmental thresholds to establish a balance between the natural environment and the human-made environment to preserve Lake Tahoe.

Specifically, The Bi-State Compact calls for the development of an integrated transportation plan addressing all modes of travel to “reduce dependency on the private automobile,” “reduce air pollution which is caused by motor vehicles,” and provide “public transportation and public programs and projects related to transportation.” The

previous issues raised by TRPA are supported by several adopted plans including the TRPA Regional Plan, the Regional Transportation Plan (RTP), the Lake Tahoe Safety Strategy, the Active Transportation Plan and the Corridor Connection Plan.

TRPA Regional Goals and Policies:

The TRPA Code of Ordinances relative to reducing environmental impacts and the Transportation policies within the Regional Plan substantiate our comments to avoid or minimize widening of the roadway, potential to reduce lane widths, the length of the acceleration and deceleration lanes, and speed limits; for incorporation of on-street bicycle facilities into project designs, and to preserve and link existing Tahoe Trail path segments to project improvements.

In order to permit a project TRPA must make findings that applicable Goals and Policies have been addressed. The following Goals and policies are an example of considerations for the project:

- TRPA Code Section 36.5.1: Existing natural features shall be retained including minimizing vegetation removal and maintaining natural slope of the project site.
- TRPA Code Section 66.1.3 & 66.1.4: Cannot implement a project that will negatively impact a scenic resource or viewpoint (both highway shoreline)
- TRPA Code Section 30.4.2.A.2 Linear Public Facilities and Public Health and Safety Facilities: Additions to linear public services (which includes a roadway) may be permitted so long as the application can show that there is no feasible alternative that will reduce the impacts to scenic resources, tree removal, additional coverage, grading, cut and fill slopes.
- TRPA Code Section 36.5.2.B: Design Standards for Public Service Projects shall include Active Transportation
- RTP Policy 1.8: strongly encourages traffic calming and noise reduction strategies when planning transportation improvements
- RTP Policy 2.14: calls for construction, upgrades and maintenance of pedestrian and bicycle facilities consistent with the active transportation plan
- RTP Policy 2.15: calls for accommodation of the needs of all categories of travelers by designing and operating roads for safe, comfortable, and efficient travel of roadway users of all ages and abilities such as pedestrians, bicyclists, transit riders, motorists, commercial vehicles, and emergency vehicles
- RTP Policy 2.18: calls for roadway improvements to construct, upgrade and maintain active transportation and transit facilities along major travel routes. In constrained locations, all design options should be considered, including but not limited to restriping, roadway realignment signalization and purchase of right of way

- RTP Policy 4.8: prohibits the construction of roadways to freeway design standards in the Tahoe Region
- RTP Policy 5.2: calls for multimodal access to recreation sites

The Safety Strategy calls for designated Class II (striped) or other specific space for bicyclists (such as bikeable shoulders) be installed on roadways to close gaps in the bicycle network. Further, the strategy seeks treatments for motor vehicles, such as reconfiguring roadways to reduce the number of through vehicle lanes, to increase safety at intersections. Data analysis conducted for the strategy identified the top two contributing factors to motor vehicle crashes within the study period were unsafe speed (31 percent of total) and improper turning (10 percent). Reducing roadway width, lane widths and posted speed limits, as well as incorporating HSIP-approved treatments, such as vehicle speed feedback signs and high friction pavement treatment, can also be used to emphasize the need to slow vehicle speeds, to increase driver awareness to roadway features and reduce crash risks.

The Active Transportation Plan identified the need for an on-street bicycle lane in the project area, designated the Round Hill intersection as a priority needing active transportation improvements, and calls for completion (and at a minimum, maintenance) of the regional shared-use path connecting around the lake (the Tahoe Trail). A possible location of this trail could utilize the existing NDOT right of way within this roadway segment (per TTD Stateline to Stateline Trail Feasibility Study, 2011).

The Corridor Connection Plan upholds these policies, strategy and plan by seeking to support transformational change through shifting a majority of trips in the basin to multimodal options; to manage congestion by improving access for all users by prioritizing safety for all users; to enrich the quality of life of residents and visitors through an enhanced multimodal transportation system; to improve the environment through reducing congestion, vehicle miles traveled, greenhouse gas emissions and roadway impacts to improve the clarity of Lake Tahoe; and to support economic vitality by supporting, among other things, recreation and tourism by efficiently moving people and goods.

Additionally, TRPA public engagement processes have consistently fielded requests from the public for increased safety for people walking, riding bicycles and driving in this area.

We share this information with you now to further clarify the origin and purpose of our submitted comments so that the project design meets the purpose and need of the project while also being consistent with TRPA environmental thresholds and the TRPA Regional Plan.

To those ends, we request a reevaluation of the existing acceleration/deceleration lane NEPA design option be evaluated in the NEPA and in the TRPA environmental document so that safety benefits and environmental impacts can be evaluated and commented upon by NDOT and TRPA.

- Evaluate the location of the existing Round Hill Pines approach to improve sight distance with no acceleration or decelerations lanes. This would include restriping through lanes to 11' to provide 2' shoulders.
- Evaluate relocating the existing approach to improve sight distance and include only a 12' wide left-in (storage lane) and left-out (acceleration lane) with 11' lanes and 2' shoulders.

We look forward to working with FHWA-CFL and NDOT in delivering this important project that satisfies the unique mobility, environmental, and safety concerns of the Lake Tahoe Basin.

Appendix H – Nevada DOT Road Design Guide Excerpts

SECTION 3 DESIGN ELEMENTS

Ramps: Direct and semi-direct ramps generally are designed with a high speed exit and a high speed entrance and are designed with Method 5. For ramps designed for speeds less than 45 mph, Method 2 can be used for the ramp proper. For loop ramps with a design speed less than 45 mph, use "Table 3-13," *2018 Green Book*, Page 3-54 for superelevation. Superelevation development at ramp entrances and exit terminals is shown in "9.6.4 Superelevation for Turning Roadways at Intersections", *2018 Green Book*, Page 9-83.

Axis of Rotation: For undivided highways, the axis of rotation for superelevation is usually the centerline of the traveled way. However, in special cases where curves are preceded by long, relatively level tangents, the plane of superelevation may be rotated about the inside edge of the pavement to improve perception of the curve.

For divided highways, if future widening is to the inside median, then rotate dual roadbeds in a single plane about centerline. When considering facilities for future widening to the outside shoulder, roadbeds should be rotated independently to reduce earthwork, and to reduce the length of the superelevation transitions. For example, the longer superelevation transitions can have an adverse impact to closely spaced ramps. ("Methods of Attaining Superelevation", *2018 Green Book*, Page 3-81)

The preferred axis of rotation for ramps is along the outside shoulder line in the direction of travel. It is occasionally placed along the inside shoulder line to better facilitate drainage or earthwork concerns. The axis of rotation for multi-lane ramps and direct connects is usually at centerline and one lane for number of lanes rotated. Appearance and drainage should always be taken into consideration in selection of the axis of rotation.

3.6 Lanes

Width: Traffic lanes intended for use by motor vehicles should be 12' wide with an additional 2' added when the lane is directly adjacent to a curb or other physical feature. A project intended to be used as "Complete Streets" may reduce lane width less than 12'. See *FHWA Road Diet Informational Guide* for more information on "Complete Streets".

To make bicycle travel safer on urban streets, the Department has agreed to stripe State owned and maintained roadways within Clark County using a marking standard established by the RTC of Southern Nevada as a guideline. The intent is to provide a shared outside travel lane of 14' for bicyclists by reducing our standard 12' travel lanes to 11'. Any lane next to a median barrier or curb will be a minimum 12' wide with a desirable width of 13'. On preservation projects, it will not always be possible to provide the desired lane configuration and judgment will have to be used to determine an acceptable compromise between lane widths and the desire to provide a 14' outside travel lane. The Principal Road Design Engineer shall review all compromises.

On reconstruction projects or new roadway projects, it is desirable to use a 15' outside travel lane width while maintaining 12' travel lanes. If this will cause the need for new right-of-way or significantly increase the size of takes, then the RTC standard may be used as described in the paragraph above. If Federal funds are involved, then any planned bicycle facility must be accommodated.

Minimum Acceleration and Deceleration Lengths for Entrance and Exit Terminals: See "Table 10-4. Minimum Acceleration Lane Lengths for Entrance Terminals with Flat Grades of Less Than 3 Percent", *2018 Green Book*, Page 10-132 and "Table 10-6. Minimum Deceleration Lane Lengths for Exit Terminals with Flat Grades of Less Than 3 Percent", *2018 Green Book*, Page 10-138 for information on determining minimum lengths on entrance and exit terminals.

Auxiliary Lanes: Auxiliary lanes are defined as the portion of the roadway adjoining the traveled way for speed change, turning, and storage for turning, weaving, truck climbing, and other purposes supplementary to through traffic movements. The width of an auxiliary lane should be equal to the through lanes (12' preferred). An auxiliary lane may be provided to comply with the concept of lane balance, with capacity needs, or to accommodate speed changes, weaving and maneuvering of entering and exiting traffic. Where auxiliary lanes are provided next to freeway mainline lanes, the adjacent shoulder should desirably be 8'-12' in width, with a minimum 6' wide shoulder. ("10.9.5.10 Auxiliary Lanes," *2018 Green Book*, Page 10-90)

Lane Balance: To provide efficient traffic operation through and beyond an interchange, there shall be a balance in the number of lanes on the freeway and ramps. The basic number of lanes should be established for a substantial length of freeway and should not be changed through pairs of interchanges; variations in traffic demand should be accommodated by means of auxiliary lanes where needed.

SECTION 3 DESIGN ELEMENTS

At a freeway entrance, the number of lanes beyond the entrance should not be less than the sum of the merging roadway lanes and the freeway minus one but may be equal to the sum of all traffic lanes on the merging roadway. At a freeway exit, the number of approach lanes before the exit should be equal to the number of the lanes on the freeway beyond the exit, plus the number of lanes on the exit, minus one.

Exceptions to these principles occur at cloverleaf loop ramp exits that follow a loop-ramp entrance and at exits between closely spaced interchanges. The traveled way on the freeway should not be reduced by more than one traffic lane at a time. Examples of proper lane balance can be seen in "10.9.5.9 Coordination of Lane Balance and Basic Number of Lanes," *2018 Green Book*, Page 10-87.

Lane Tapers: For freeway lane tapers, see "Figure 10-72. Typical Single-Lane Entrance Ramps," *2018 Green Book*, Page 10-129. Refer to the *Access Management System and Standards, current version* for lane tapers other than freeways.

Ramps: The desirable single lane ramp width is 24' (Striped 4'-12'-8"). On 3R projects, substandard ramp widths should be addressed during the Preliminary Design Field Study (PDFS) where it is economically feasible to widen them to meet current standards. See Section 2.1 for shoulder width criteria.

Bike lanes: Bike lanes are used when it is desirable to delineate a portion of the pavement for preferential use by bicyclists or to provide for more predictable vehicle movements. Bike lanes are delineated with signs and pavement markings. They should be one-way facilities located within the limits of the paved shoulder. The minimum width of a bike lane is 4'. In areas with raised curb or longitudinal barriers, the minimum width is 5'. The open graded plantmix surface wearing course is to be paved flush with the lip of the gutter pan and inlet grates. A width of 5' or greater is preferred where substantial truck traffic is present, or where motor vehicle speeds exceed 50 mph.

On highways without full control of access where a bridge deck is being replaced or rehabilitated, and where bicycles are permitted to operate at each end, the bridge should be reconstructed so that bicycles can be safely accommodated when it can be done at a reasonable cost. Consultation with local groups of organized bicyclists is encouraged in the development of projects with bicycle facilities.

In situations where the lateral offset of an existing longitudinal traffic barrier from the shoulder stripe is less than 5' then, in consideration of bicycle traffic, the placement of a rumble strip must be justified by an engineering study. The study should consider: [a] the consequences of omitting the rumble strip adjacent to the traffic barrier, and [b] adjusting the lateral offset of the traffic barrier to at least 5'. On new roads or new traffic barrier installations on existing roads, the minimum distance from the shoulder line to the face of the traffic barrier is 6' if the road also serves as a bikeway.

Additional resources: For further guidance refer to AASHTO's Guide for Development of Bicycle Facilities. Information is requested through Transportation/Multimodal Planning for bicycle facilities, bus lanes and turnouts.

3.7 Shoulders

Interstate: An adopted criterion for Interstate highways specifies the paved width of the right shoulder shall not be less than 10'. Where truck traffic exceeds 250 DDHV a 12' right shoulder should be considered. On freeways with six or more lanes the usable paved width of the median shoulder should also be 10' and preferably 12' where the truck traffic exceeds 250 DDHV. On four-lane freeways, the left shoulder is normally 4' to 8' wide, at least 4' of which should be paved, and the remainder stabilized. ("8.2.4 Traveled Way and Shoulders", *2018 Green Book*, Pages 8-3 and 8-4) The Department prefers a 4' inside shoulder and 8' outside shoulders on NHS routes and 2' inside shoulders and 4' outside shoulder minimum on State Routes. In the event these widths cannot be achieved, coordinate with the Principal Road Design Engineer.

Drainage: Consult with the Hydraulic Division if shoulder widths adjacent to barrier rail or curb and gutter are proposed to be reduced as this may affect onsite drainage design criteria.

Biological Assessment / Biological Evaluation
for the
NV FLAP US 50(1) Round Hill Pines Access
Douglas County, Nevada

Prepared for:
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue St. 380 N
Lakewood, CO 80228



Revised
September 2020

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Acronyms and Abbreviations

CFLHD	Central Federal Lands Highway Division
ESA	Endangered Species Act
FHWA	Federal Highways Administration
FLAP	Federal Lands Access Program
IPaC	Information for Planning and Consultation
LCT	Lahontan Cutthroat Trout
LTBMU	Lake Tahoe Basin Management Unit
MIS	management indicator species
NNHP	Nevada Natural Heritage Program
SNYLF	Sierra Nevada Yellow-legged Frog
SGCN	species of greatest conservation need
STA	station
TRPA	Tahoe Regional Planning Agency
TYC	Tahoe yellowcress
US	U.S. Route
USC	United States Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

1.0 Introduction

The Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD), in cooperation with the U.S. Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Authority (TRPA), is proposing to construct improvements to a 0.45-mile segment of U.S. Route 50 (US 50) and relocate the current access road into the Round Hill Pines Beach Resort along a new alignment. The purpose of the project is to increase safety and improve accessibility for motorists, pedestrians, and bicycles entering and exiting Round Hill Pines Resort from US 50 in Douglas County, Nevada. Funding for the project is provided through the Federal Lands Access Program. Construction is currently programmed to begin in 2022.

The following are the purposes of this biological assessment/biological evaluation:

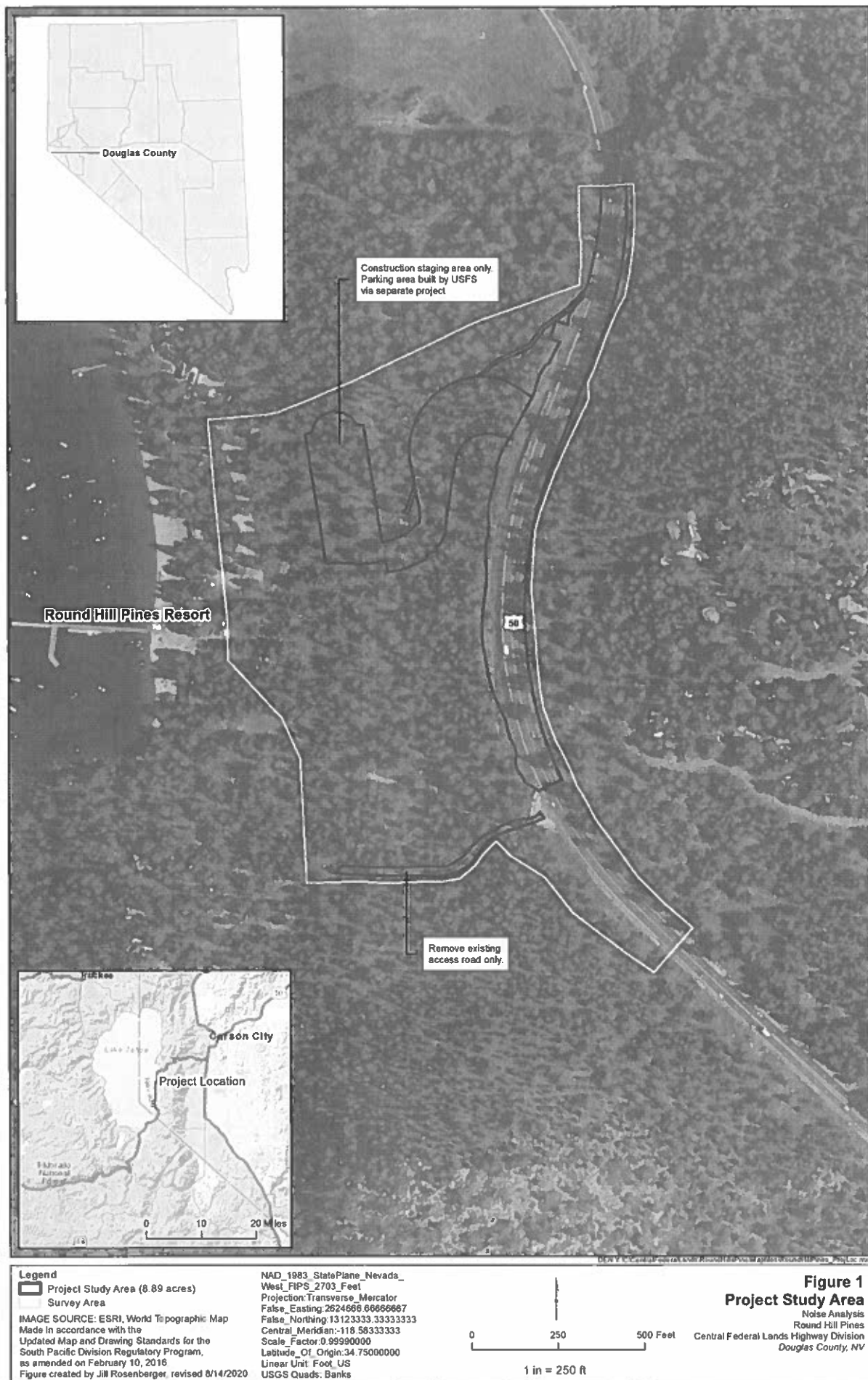
1. Review the proposed improvements to US 50 and relocation of the Round Hill Pines access road sufficiently to determine if the proposed action may affect threatened, endangered, proposed, or candidate species and their designated or proposed critical habitat requiring informal or formal consultation or conference with the U.S. Fish and Wildlife Service (USFWS) pursuant to the Endangered Species Act of 1973 ([ESA] 16 United States Code [USC] 1531 et seq.)
2. Determine whether the proposed action would impact LTBMU and TRPA sensitive species and State Species of Greatest Conservational Need (SGCN)
3. Determine the occurrence of wetlands, waterbodies, noxious weeds, potential impacts to migratory birds, and wildlife migration patterns

2.0 Description of the Proposed Action

As part of the Proposed Action, the Round Hill Pines Resort access road and US 50 intersection would be relocated approximately 0.2 mile further to the north from the existing location. U.S. Highway 50 would be widened at the relocated intersection to accommodate a new median left turn bay and eastbound US 50 acceleration lane. The US 50 cross section at the relocated intersection would consist of two 12-foot eastbound lanes two 12-foot westbound lanes, a 12-foot wide median left turn bay and eastbound US 50 acceleration lane. Shoulder widths along US 50 would remain the same as existing and would consist of 4-foot along US 50 westbound and 6-foot along US 50 eastbound. The US 50 alignment would not change as part of the proposed project. The remaining areas of US 50 adjacent to the relocated intersection would receive a pavement mill and overlay, lane striping, pavement markings and a safety edge in addition to the widening.

An existing concrete slab retaining wall is located along the west US 50 slope embankment facing into the Round Hill Pines Resort. The existing retaining wall would remain in place and the slope paving would be removed. Guardrail would be used at this location along with 1:2 slopes to minimize the construction footprint. A curb section with minimal ditching would be added along the west side of US 50 and no ditches would be constructed along the east side of US 50. Roadway slopes would be constructed using boulders and vegetation to enhance visual aesthetics and blend into the natural setting.

Existing 18- and 36-inch culverts within the project area would be replaced as well as armored with riprap where feasible. The clear zone, which is the area available for safe use by errant vehicles, would be improved through removal of obstructions, including clearing vegetation adjacent to the roadway as feasible. All traffic control signs would be reviewed and replaced, if needed, to meet current standards.



The Round Hill Pines access road would be constructed on new alignment. The access road would be reconstructed to accommodate two 12-foot lanes with 2-foot wide shoulders. The new access road would have barn-roof slopes consisting of 1:4 within the clear zone (12 feet from edge of traveled way) with 1:2 slopes to reduce construction impacts (L. Edgar, pers. comm. 2020).

3.0 Species Considered and Evaluated

3.1 Pre-field Review

On May 29 and June 5, 2019, and July 15, 2020, Jacobs Engineering Group Inc. (Jacobs) requested a list of federal ESA-listed species, critical habitat, and state SGCN that may occur in the action area, and/or may be affected by the proposed project from the following sources (see Appendix B):

- USFWS's Information for Planning and Consultation (IPaC) online system
- Nevada Natural Heritage Program (NNHP) Data Request Tool
- Tahoe Regional Planning Agency (TRPA)
- Lake Tahoe Basin Management Unit (LTBMU)

According to the NNHP (2019a), wildlife and plant species are prioritized into five tiers within the state: S1, S2, S3, S4, and S5. Tier S1 contains those species at very high risk of extirpation in the jurisdiction because of very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors. Tier S2 contains species at high risk of extirpation in the jurisdiction because of restricted range, few populations or occurrences, steep declines, severe threats, or other factors. Tier S3 contains species at moderate risk of extirpation in the jurisdiction because of a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors. Only Tiers S1, S2, and S3 species are analyzed in this report, Tiers S4 and S5 species were not analyzed because of their stable population status and lower conservation need.

State of Nevada Protected Species are prioritized into 23 categories within the state (NAC 503 and 527). Species identified to potentially occur within the project area fall into the Critically Endangered Plant (CE), the Protected Mammal (PM), the Game Fish (GF), the Endangered Bird (EB), the Fur-bearing Mammal (FM), the Game Mammal (GM), the Sensitive Bird (SB), Sensitive Mammal (SM), and the Nevada State Symbol (EM) categories.

U.S. Forest Service LTBMU sensitive species were identified through email correspondence with FHWA-CFLHD (L. Edgar, 2019b) and by reviewing the *Integrated Management and Use of Roads, Trails, and Facilities Project (Lake Tahoe Basin Management Unit, El Dorado, Placer, Washoe, Carson City and Douglas Counties)*. Species requiring further analysis are included in Table 1, other species considered, but not further analyzed are included in Appendix D.

TRPA special interest species occurrence and mapping were accessed via TRPA website, on May 29 as well as TRPA environmental checklist to review locally important species and features for consideration during project development (TRPA 2019).

According to the IPaC and NNHP Data Request Tool results, seven ESA- or state-listed species were identified as potentially occurring within the action area (Table 1). All seven of these species will be evaluated further for the presence of suitable habitat (e.g., soils, climate, disturbance, and plant communities) within the action area based on desktop analysis, project scoping, and field surveys. Sources of data reviewed included the following:

- USFWS Species Profiles (species status, distribution, and ecology) (2019a, 2019b)
- NNHP species abstracts (2019b)
- Field studies and personal knowledge of the action area and ecological setting

Table 1 summarizes the habitat and range information for each listed species evaluated during this analysis.

Table 1. Federal and State Listed Species Considered for Further Analysis

Scientific Name	Common Name	Regulatory Status ¹		General Habitat Description ²
		Federal	Special Status	
<i>Gulo gulo luscus</i>	North American Wolverine	PT	USFS	Uses caves, hollows, logs, rock outcrops, and burrows for cover. Presence is positively associated with higher elevation snow pack, snags, talus, and remote undisturbed wilderness with minimal motorized access and low human population densities.
<i>Rana sierra</i>	Sierra Nevada Yellow-legged frog	E	USFS	Large permanent water bodies or streams that are fishless and >4,000 feet. Associated with high-elevation water bodies, but they are capable of long-distance travel. Within water bodies, adults and tadpoles prefer shallower areas and shelves with solar exposure (features rendering these areas warmer).
<i>Oncorhynchus clarkia henshawi</i>	Lahontan Cutthroat Trout	T	GF, EM, S3	Inhabits lakes and streams and requires cool, well-oxygenated water. It is adapted to highly mineralized waters. In streams, the LCT uses rocky areas, riffles, deep pools, and areas under logs and overhanging banks.
<i>Rorippa subumbellata</i>	Tahoe yellowcress	-	CE, S1, USFS	Coarse sand and sandy soils of active beaches, stream inlets, beach dunes, and backshore depressions, generally within a few feet of the local water table, endemic to the shore zone of Lake Tahoe.
<i>Myotis thysanodes</i>	Fringed myotis	-	PM, S2, USFS	Roosts in crevices in rocks, cliffs, buildings, underground mines, caves, bridges, and in large, decadent trees. Mostly found in dry habitats (grasslands or deserts) interspersed with mature forests (especially ponderosa pine, piñon-juniper, or oak).
<i>Thomomys monticola</i>	Mountain pocket gopher	-	S3	Occur in mountain meadows and rocky slopes in pine, fir, and spruce. In rich moist soil, as well as gravelly or rocky ground. They can generally be found on open forest floor and at the edge of meadows. Mountain pocket gophers are found at high altitudes where temperatures are lower than the habitat of other pocket gopher species.
<i>Zapus princeps</i>	Western jumping mouse	-	S2	Occur in mountain meadows, marshes, and along banks of streams and ponds, in dense cover of tall grasses and herbs. They nest in burrows in well-drained mound or elevated banks or on the surface among vegetation.

¹ Regulatory Status

- = No Status
 CE = critically endangered plant
 E = federally listed as endangered
 EM = Nevada state symbol
 GF = game fish
 PM = protected mammal
 PT = federally proposed threatened

S1 = NNHP state rank 1
 S2 = NNHP state rank 2
 S3 = NNHP state rank 3
 T = federally listed as threatened
 USFS = USFS Lake Tahoe Basin Management Unit [LTBMU] sensitive

² Sources:

NNHP's Species Information (2019b)
 NatureServe Species Profiles (2019)

3.2 Field Review and Surveys

Jacobs biologists conducted site visits to perform a habitat assessment for ESA-listed species, state SGCN, USFS-sensitive and management indicator species (MIS) and TRPA special interest species within the action area on June 5, 2019. During the habitat assessment, information about hydrology, vegetation, and habitat suitability for special-status species were photographed (see Appendix C) and recorded.

4.0 Agency Coordination to Date

The following agency coordination has been completed to date:

- An official species list of threatened or endangered species that may occur in the action area was requested through the USFWS IPaC online system on May 29, 2019 and July 15, 2020.
- A listing of sensitive species known to occur in Douglas County was pulled from the NNHP website on May 29, 2019.
- An official species list of sensitive species that may occur in the action area was requested through the NNHP data request online system on June 5, 2019.
- Integrated Management and Use of Roads, Trails, and Facilities Project (Lake Tahoe Basin Management Unit, El Dorado, Placer, Washoe, Carson City and Douglas Counties) was reviewed in May 2019

5.0 Action Area/Biological Setting

The regulations governing consultations under the ESA define the “action area” as “*all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action*” (51 Federal Register 19957). The action area should be determined based on consideration of all direct and indirect effects of the proposed agency action (project) (50 Code of Federal Regulations 402.02 and 402.14[b][2]). Therefore, the action area (proposed action) is typically larger than the area directly affected by the action. For this project, the action area consists of a 1-mile radius from the proposed survey because of the potential for noise impacts and visual disturbance from construction activities. All direct and indirect effects are expected to be contained within this 1-mile radius. For plants, the action area consists of all areas confined within the survey area.

The project would occur on USFS land along a developed highway in the Sierra Nevada Ecoregion, characterized by a deeply dissected block fault that rises sharply from the arid basin and range ecoregions on the east and slopes gently toward the Central California Valley to the west (NFWS 2014). The vegetation is mixed conifer and are predominately white fir (*Abies concolor*) and lodgepole pine (*Pinus contorta*) on the western side and Jeffery pine (*Pinus jefferyi*) and lodgepole pine on the eastern side. Higher elevations include red fir (*Abies magnifica*), mountain hemlock (*Tsuga martensiana*), and western white pine (*Pinus monticola*). There are many high mountain lakes, streams, and meadow/riparian areas. Alpine conditions exist at the highest elevations (NFWS 2014). The project is located within the montane coniferous forest community (USDA NRCS 2006) at approximately 6,250 to 6,380 feet in elevation. The topography through the action area is generally sloped, east to west, down towards Lake Tahoe.

Montane coniferous forest vegetation within the action area consists mainly of Ponderosa pine (*Pinus ponderosa*), Jeffery pine, Douglas fir (*Pseudotsuga menziesii*), western juniper (*Juniperus occidentalis*), snowbrush (*Ceanothus velutinus*), antelope bitterbrush (*Purshia tridentata*), whiteleaf manzanita (*Arctostaphylos viscida*), serviceberry (*Amelanchier spp.*), mountain big sagebrush (*Artemisia tridentata*

ssp. vaseyana), prickly phlox (*Leptodactylon pungens*), fireweed (*Chamerion angustifolia*), threadleaf sedge (*Carex philifolia*), needlegrass (*Stipa occidentalis*), Sandberg bluegrass (*Poa secunda*), smooth brome (*Bromus inermis*), cheatgrass (*Bromus tectorum*), and bulbous bluegrass (*Poa bulbosa*).

The action area is in the Lake Tahoe sub-section of Great Basin Watershed (USGS 2019). Surface runoff of the project area drains from east to west with the slope of the project area, towards Lake Tahoe. Lake Tahoe is located approximately 3,000 feet west of project boundary. Delineations were performed by Jacobs and CFLHD environmental staff, using the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (USDS NRCS 2019). One culvert exists within the project boundary, where water from rain events flows under the paved trail currently existing in the project area. Flow from rain events through this culvert has created an unvegetated swale that lacks an ordinary high water mark or other jurisdictional features. We can conclude that this project will not impact any jurisdictional wetlands, waterbodies, or other waters of the United States.

6.0 Species Evaluation

The action area was evaluated for the presence of, and potential to support, ESA-listed species and state SGCN. The action area includes the area that could be directly impacted by project actions plus the surrounding land adjacent to the project limits that may be disturbed by project activities. Most of the potential direct project-related habitat disturbance would occur within the proposed project boundaries. In addition, indirect effects related to the project, including cumulative effects, will be described and evaluated.

6.1 ESA-Listed Species

Based upon site visits and extensive literature research and review, it has been determined that the proposed project would have **no effect** on any federally listed, proposed, or candidate species or any proposed critical habitat.

This section contains background information, potential project-related effects, and ESA Section 7 determinations for the three federal ESA-listed species that have a potential to occur within or near the action area. These species and the effect determinations for each are described in the following sections.

- North American wolverine (*Gulo gulo luscus*) – ESA Proposed Threatened
- Sierra Nevada yellow-legged Frog (SNYLF) (*Rana sierra*) – ESA Endangered with Final Critical Habitat (project site is outside of final critical habitat)
- Lahontan cutthroat trout (LCT) (*Oncorhynchus clarkia henshawi*) – ESA Threatened

6.1.1 North American Wolverine

6.1.1.1 Status and Distribution

The North American wolverine is the largest terrestrial member of the family Mustelidae, with adult males weighing 26 to 40 pounds and adult females weighing 17 to 26 pounds. It resembles a small bear with a bushy tail. It has a round, broad head; short, rounded ears; and small eyes. There are five toes on each foot, with curved and semi-retractile claws used for digging and climbing. The species' historical range includes California, Colorado, Idaho, Oregon, Minnesota, Montana, Nevada, North Dakota, Utah, Washington, and Wyoming. The USFWS currently lists the North American wolverine as a proposed threatened species under the ESA. (2019b)

6.1.1.2 Life History and Habitat Relationships

Wolverines are limited to alpine tundra and boreal and mountain forests (primarily coniferous) in the western mountains, especially large wilderness areas. However, dispersing individuals have been found

far outside of usual habitats. They are usually in areas with snow on the ground in winter. Riparian areas may be important winter habitat. When inactive, wolverines occupy dens in caves, rock crevices, under fallen trees, in thickets, or similar sites. Wolverine are primarily terrestrial but may climb trees. (2019b)

Breeding generally occurs from late spring to early fall. Females undergo delayed implantation until the following winter to spring, when active gestation lasts from 30 to 40 days. Litters are born between February and April, containing one to five kits, with two to three kits being the most common number. Female wolverines use natal (birthing) dens that are excavated in snow. Persistent, stable snow greater than 5 feet deep appears to be a requirement for natal denning, because it provides security for offspring and buffers cold winter temperatures. Female wolverines go to great lengths to find secure den sites, suggesting that predation is a concern. Natal dens consist of tunnels that contain well-used runways and bed sites and may naturally incorporate shrubs, rocks, and downed logs as part of their structure. Occupation of natal dens is variable, ranging from approximately 9 to 65 days. (2019b)

6.1.1.3 Population Trend

On February 28, 2008, a detection of a lone male wolverine occurred approximately 14 to 19 miles northwest of the LTBMU near Truckee, California. This was the first verified record of a wolverine from California since 1922. Agency biologists and researchers used genetic samples (i.e., hair and scat) to determine that the wolverine was most closely related to, and most likely came from, a population on the western edge of the Rocky Mountains rather than either the historical California population (compared to samples taken from museum specimens) or contemporary northern Cascades (Washington) population. This attempted dispersal event may represent a continuation of the wolverine expansion in the contiguous United States and other wolverines may have traveled to the Sierra Nevada and remain undetected. However, there is no evidence that California currently hosts a wolverine population or that female wolverines have made, or are likely to make, similar dispersal movements. There are no current occurrences on the LTBMU. There are approximately 50,000 acres of wolverine habitat on the LTBMU. (USFS LTBMU 2016)

6.1.1.4 Occurrence in the Action Area

The North American wolverine it is not known to currently occur on the LTBMU (USFS LTBMU 2016).

6.1.1.5 Determination

The proposed threatened North American wolverine does not occur on the LTBMU. No direct, indirect, or cumulative effects are expected to occur because of the proposed project. Therefore, it is the determination of this report that the proposed project is not likely to jeopardize the proposed threatened wolverine.

6.1.2 Sierra Nevada Yellow-legged Frog

6.1.2.1 Status and Distribution

SNYLF occupy the western Sierra Nevada north of the Monarch Divide (in Fresno County) and the eastern Sierra Nevada (east of the crest) in Inyo and Mono counties. The body length (snout to vent) of the SNYLF ranges from 1.5 to 3.25 inches. Females average slightly larger than males, and males have a swollen, darkened thumb base (USFWS 2013a). The SNYLF was listed as an endangered species January 10, 2014, by USFWS under the ESA. (USFWS 2014)

6.1.2.2 Life History and Habitat Relationships

SNYLF are rarely found more than 3 feet from water, usually near rocky stream beds, lakes, ponds, and tarns, typically with grassy or muddy banks and edges. Both adults and larvae overwinter for up to 9 months in the bottoms of lakes that are at least 5.5 feet deep (some evidence that lakes at least 8.2 feet are ideal), under ledges of stream or lake banks, or in rocky streams. Mating and egg-laying occur from May to August. Egg-laying sites must be connected to permanent lakes or ponds that do not freeze to the

bottom in winter, because the tadpoles overwinter, possibly taking as many as three or four summers before they transform. (NNHP 2019b)

6.1.2.3 Population Trend

The SNYLF is presently in danger of extinction throughout its entire range, based on the immediacy, severity, and scope of the threats to its continued existence. These include habitat degradation and fragmentation, predation and disease, climate change, inadequate regulatory protections, and the interaction of these various stressors impacting small remnant populations. There has been a range-wide reduction in abundance and geographic extent of surviving populations of SNYLF following decades of fish stocking, habitat fragmentation, and most recently, a disease epidemic. Surviving populations are smaller and more isolated, and recruitment in disease-infested populations is much reduced relative to historical norms. This combination of population stressors makes persistence of the species precarious throughout the currently occupied range in the Sierra Nevada. (USFWS 2013a)

6.1.2.4 Occurrence in the Action Area

Although the SNYLF is known to occur nearby in the Desolation Wilderness and has final critical habitat approximately 10 miles southwest in the Crystal Mountain range, it is not known to occur in the action area (USFWS 2016), nor is there suitable habitat for SNYLF within the action area. therefore, we can conclude that the SNYLF does not occur within the action area.

6.1.2.5 Determination

Because of lack of suitable aquatic features such as fishless streams and lakes, and lack of breeding and foraging habitat for the SNYLF within the action area, no direct, indirect, or cumulative effects are expected to occur as a result of the proposed project. Therefore, it is the determination of this report that the proposed project will have **no effect** on this species and will not be addressed further in this report.

6.1.3 Lahontan Cutthroat Trout

6.1.3.1 Status and Distribution

LCT historically occupied large freshwater and alkaline lakes, small mountain streams and lakes, small tributary streams, and major rivers of the Lahontan Basin of northern Nevada, eastern California, and southern Oregon, including the Truckee, Carson, Walker, Susan, Humboldt, Quinn, Summit Lake/Black Rock Desert, and Coyote Lake watersheds (USFWS 1995, 2009). Large lakes included Lake Tahoe, Fallen Leaf Lake, and Cascade Lake in the Tahoe watershed; Donner Lake, Independence Lake, Winnemucca Lake (now dry), and Pyramid Lake in the Truckee River watershed; Walker Lake in the Walker River watershed; and Summit Lake in the Black Rock Desert watershed (Gerstung 1988; USFWS 2009).

6.1.3.2 Life History and Habitat Relationships

LCT inhabit lakes and streams but are obligatory stream spawners. Distance traveled to spawning sites varies with stream size and strain of LCT (strain refers to locally adapted populations in a particular area or environment). Populations in Pyramid and Winnemucca Lakes migrated as far as 100 miles up the Truckee River into Lake Tahoe and its tributary streams. Small, intermittent, tributary streams and headwater reaches are sometimes used as spawning sites. Spawning generally occurs from April through July, depending upon stream flow, elevation, and water temperature. LCT in fluvial environments generally become sexually mature around 3 years while LCT in lacustrine environments become sexually mature between 3 and 4 years of age. (USFWS 2019a)

Optimal stream habitat is characterized by clear, cold water with silt-free substrate and a 1:1 pool-riffle ratio. Streams should have a variety of habitats including areas with slow deep water, abundant instream cover (i.e., large woody debris, boulders, undercut banks), and relatively stable streamflow and temperature regimes. Streambanks should be well vegetated to provide cover, shade, and bank

stabilization. Lacustrine LCT populations have adapted to a wide variety of lake habitats from oligotrophic (with low nutrient levels and primary productivity) alpine lakes (e.g., Independence Lake) to large, productive desert terminal lakes (e.g., Pyramid Lake). Unlike most freshwater fish species, LCT have been reported to tolerate alkalinity and total dissolved solid levels as high as 3,000 milligrams/liter (mg/L) (3,000 parts per million [ppm]) and 10,000 mg/L (10,000 ppm), respectively (USFWS 2019a). In 1970, the LCT was listed as endangered, but in 1975 it was reclassified as threatened under the ESA (USFWS 2013b). The LCT is also listed as a SGCN rank S3 species (NNHP 2019b).

6.1.3.3 Population Trend

The LCT was once the top fish predator in Lake Tahoe. In the mid-1800s when settlers first began arriving at Lake Tahoe, the water was teeming with native cutthroat. By 1880, over fishing, the damage to the LCT's habitat, and the introduction of non-native lake trout began to take their toll. Commercial fishing was banned in 1917, but LCT in Lake Tahoe did not survive. LCT outside of the Lake Tahoe Basin also declined. In 1844, there were 11 lake-dwelling populations of Lahontan cutthroat trout and 400 to 600 stream-dwelling populations in over 3,600 miles of streams within the major basins of historical Lake Lahontan. Today, they only occur in 10.7 percent of their historical stream habitat and 0.4 percent of their lake habitat. LCT was listed as endangered in 1970 and reclassified as threatened in 1975. In 1997, during the Lake Tahoe Presidential Forum, former President Bill Clinton and Interior Secretary Bruce Babbitt called for the Lahontan cutthroat trout to be restored to the Lake. (USFWS 2013b)

6.1.3.4 Occurrence in the Action Area

Lahontan cutthroat trout were introduced to the headwaters of the Upper Truckee River in Meiss Meadows in the late 1980s and early 1990s through a cooperative effort between the California Department of Fish and Wildlife, USFS, and USFWS. The Meiss Meadow population is one of the only high-elevation meadow populations of LCT in the Sierra Nevada mountain range, and it also functions as a source population for LCT in lower river segments of the Upper Truckee River. This is the only self-sustaining population in the LTBMU. Expansion efforts were initiated to increase the range of this population in 2009 and will continue through 2016. Additional recovery actions for LCT are ongoing in Fallen Leaf Lake and Glen Alpine Creek (USFS 2016). All these locations are on the southern shore of Lake Tahoe, while the analysis area is on the eastern shore. No suitable habitat for the LCT occurs within the action area, and the LCT does not occur in the action area.

6.1.3.5 Determination

Habitat for the threatened LCT does not occur within the action area. No direct, indirect, or cumulative effects are expected to occur because of the proposed project. Therefore, the proposed project will have **no effect** upon this species and will not be addressed further in this report.

6.2 State Species of Greatest Conservation Need

Based on the site evaluation and a review of available occurrence data for state SGCN, it was determined that potential suitable habitat for the following four species may be found in the action area:

- Tahoe yellowcress (TYC) (*Gopherus morafkai*) – Nevada State Protected Species – Critically Endangered, NNHP S1
- Fringed myotis (*Myotis thysanodes*) – Nevada State Protected Species – Protected Mammal, NNHP S2
- Western jumping mouse (*Zapus princeps*) – NNHP S2
- Mountain pocket gopher (*Thomomys monticola*) – NNHP S3

These species and the effect determination for each are described in the following section. For further information, Appendix B includes the species list received via the NNHP report, and Appendix D includes a comprehensive review of the species list and justification for inclusion or exclusion for a detailed analysis in this document.

6.2.1 Tahoe Yellowcress

6.2.1.1 Status and Distribution

TYC is a herbaceous perennial from deeply buried rhizomes that stems several from the base, generally prostrate, 2 to 8 inches long. Its overall color is dark to purplish green (sometimes yellowish), with pinnately lobed leaves, small yellow flowers, and short, shiny, hairless fruits. It can be found in Carson City, Douglas and Washoe counties, Nevada; also, in California. This species is restricted to the shore zone of Lake Tahoe (NNHP 2001). The TYC is listed as an SGSN rank S1 and is fully protected and designated an endangered species by the state of Nevada (NNHP 2019b).

6.2.1.2 Life History and Habitat Relationships

Unlike many rare plants, TYC is both a prolific seeder and exhibits vigorous clonal growth. Fruit and seed development are continuous during the growing season from May through October. At maturity, the silique opens (dehiscence) and expels 10 to 50 tiny dark brown seeds. The fruits mature starting at the base of the stem and progress toward the tip. A variety of generalist pollinators have been observed visiting TYC, mainly flies and bees, but there is no evidence that pollinators are required for successful seed production. The high proportion of flowers that produce fruit suggests that the species can self-fertilize. In the summer, large accumulations of seed have been observed under and around TYC plants, and seeds are likely transported by both wind and water. (NNHP 2015)

6.2.1.3 Population Trend

In Nevada, there are four extant occurrences mapped with at least 0.6 mile of separation. These populations have a total estimated count believed to be greater than 420 individuals. These populations are trending in a decline. (NNHP 2001)

6.2.1.4 Occurrence in the Action Area

The TRPA study site open data for TYC at Round Hill shows populations of this species documented in 2016, but it shows no individuals recorded at this site in 2017 or 2018. This study site is located outside of the action area, approximately 150 feet to the west at the Round Hill Beach, on the shore of Lake Tahoe. No suitable habitat for the TYC falls within the action area.

6.2.1.5 Determination

Habitat of sandy beaches for the TYC does not occur within the action area. No direct, indirect, or cumulative effects are expected to occur because of the proposed project. Therefore, this project will not jeopardize the continued existence of the TYC nor lead to a decrease in population or potential federal listing.

6.2.2 Fringed Myotis

6.2.2.1 Status and Distribution

This species is found in western North America from south-central British Columbia to central Mexico and to the western Great Plains. In California, it is distributed statewide except the Central Valley and the Colorado and Mojave Deserts and is associated with piñon-juniper, valley foothill hardwood and hardwood-conifers (USFS LTBMU 2016). The fringed myotis is listed as an SGSN rank S2 and is designated a protected mammal by the state of Nevada (NNHP).

6.2.2.2 Life History and Habitat Relationships

The fringed myotis uses caves, crevices, cliffs, mines, large decadent trees, and bridges and buildings for roosting, hibernacula, and maternity colonies. They day and night roost under bark and in tree hollows, and in northern California they day roost in snags only. Medium to large diameter snags are important day and night roosting sites. There is increased likelihood of occurrence of this species as snags greater than 1 inch-diameter increases and percent canopy cover decreases. Large snags and low canopy cover, typical of mature, forest habitat types, offer warm roost sites. Decay classes were two to four in ponderosa pine, Douglas-fir, and sugar pine (*Pinus lambertiana*). (USFS LTBMU 2016)

6.2.2.3 Population Trend

There is little information on population size, abundance, and trends. It is suggested this is a widespread, but locally rare species; however, there are areas where it is abundant. Like other bat species, it appears there have been declines in numbers and colonies. (USFS LTBMU 2016)

6.2.2.4 Occurrence in the Action Area

Fringed myotis are dependent on older forest types. Keinath (2004) summarized this in the USFS Region 2 conservation assessment for the fringed myotis, indicating that this species depends on abundant large diameter snags and trees with thick loose bark. Thus, harvesting old growth and removal of snags for safety or fuel reduction reasons may reduce available roost sites (USFS LTBMU 2016). The action area is in an area with high human traffic, and because of this, the vegetation within the action area has been highly managed. The action area lacks old growth trees and the snags have been removed. The nearest documented roost site (Castle Rock, located in 2017) is approximately 2 miles east of the action area (TRPA 2019). Acoustic bat surveys were conducted in the LTBMU during 2004 and 2006 to 2008 by Michael Morrison and his graduate students through University of Nevada, Reno, and Texas A&M University. These surveys took place at stream and meadow sites throughout the LTBMU. Mist netting surveys were also conducted by the USFS, Pacific Southwest Research Station Multi-Species Inventory and Monitoring program in 2001 and 2002 at 24 sites throughout the LTBMU. The LTBMU conducted roost exit surveys and acoustic monitoring at several sites from 2009 to 2015. There are many detections of fringed myotis in the LTBMU (USFS LTBMU 2016). Of these detections, one was approximately 1 mile north of the action area, near Zephyr Cove, Nevada and another was approximately 2.5 miles north near the town of Skyland, Nevada.

6.2.2.5 Determination

Although this site has appropriate forage habitat, there is not suitable habitat for roosting. There is also suitable forage habitat available adjacent to the action area. No direct, indirect, or cumulative effects are expected to occur as a result of the proposed project. Therefore, this project will not jeopardize the continued existence of the fringed myotis, nor will it lead to population declines or potential federal listing.

6.2.3 Western Jumping Mouse

6.2.3.1 Status and Distribution

The western jumping mouse is distributed through western North America: southern Yukon to eastern North Dakota and northeastern South Dakota, south to east-central California, central Nevada, Utah, and north-central New Mexico (NatureServe 2019). The western jumping mouse is listed as a SGSN rank S2 (NNHP 2019b).

6.2.3.2 Life History and Habitat Relationships

Western jumping mice occur in mountain meadows, marshes, and along banks of streams and ponds, in dense cover of tall grasses and herbs. They nest in burrows in well-drained mounds, elevated banks, or on the surface among vegetation. In spring, this species feeds on insects and other invertebrates. By mid-summer, it's diet may shift to mostly grass seeds and small fruits. Adults may enter hibernation

September through October, emerging May to July depending on elevation and location. They begin breeding soon after females emerge from hibernation. Gestation lasts 18 days. Most young are born late June to early July. They produce apparently only one litter per year. Litter size is estimated at two to seven (average five). Some females bear their first litter at 1 year (NatureServe 2019).

6.2.3.3 Population Trend

Primarily solitary. Home range in Utah averaged 0.2 to 0.6 hectare in different areas in different years. Adult density was 8 to 32 per hectare in different areas. Fragmentation appears to be a contributing factor to this species decline. Major waterways and highways pose barriers for this species. (NatureServe 2019)

6.2.3.4 Occurrence in the Action Area

Suitable riparian habitat does not occur within the action area. Therefore, we can conclude that the western jumping mouse does not occur within the action area.

6.2.3.5 Determination

Riparian habitat for the western jumping mouse does not occur within the action area. No direct, indirect, or cumulative effects are expected to occur because of the proposed project. Therefore, this project will not jeopardize the continued existence of the western jumping mouse, nor does it lead to population declines or potential federal listing.

6.2.4 Mountain Pocket Gopher

6.2.4.1 Status and Distribution

Mountain pocket gophers are distributed through the Sierra Nevada mountains of central and northern California and extreme west-central Nevada (NatureServe 2019). The mountain pocket gopher is listed as a SGSN rank S3 (NNHP 2019b).

6.2.4.2 Life History and Habitat Relationships

Mountain pocket gophers are active throughout the year. They are fossorial and solitary, except during the breeding season. Their underground burrow system may cover 200 square feet for young animals to 2000 square feet for old females. Winter nest may be above ground in snow. Gestation probably lasts about 18 to 19 days. Females produce one litter of three to four young per year. Young are born in July to August. Individuals may live up to 4 years in the wild. Mountain pocket gophers occur in mountain meadows and rocky slopes in pine, fir, and spruce, in rich, moist soil as well as gravelly or rocky ground. They can generally be found on open forest floor and at the edge of meadows. Mountain pocket gophers are found at high altitudes where temperatures are lower than the habitat of other pocket gopher species. Overground dispersal is difficult for pocket gophers because of heavy predation. Mountain pocket gophers probably rely on deep snow to allow animals to disperse to new territories. Pocket gophers are ecologically important as prey items and in influencing soils, microtopography, habitat heterogeneity, diversity of plant species, and primary productivity (NNHP 2019b).

6.2.4.3 Population Trend

Population density can be 10 to 35 per hectare (NNHP 2019b).

6.2.4.4 Occurrence in the Action Area

Suitable habitat of open forest floor or mountain meadows is not present within the action area. It is the determination of this report that the mountain pocket gophers will not occur within the action area.

6.2.4.5 Determination

Habitat for the mountain pocket gopher does not occur within the action area. No direct, indirect, or cumulative effects are expected to occur because of the proposed project. Therefore, this project will not jeopardize the continued existence of the mountain pocket gopher nor will it lead to population declines or potential federal listing.

6.3 Other Resources of Concern

6.3.1 Migratory Birds

Migratory birds are protected by a variety of federal laws but are primarily protected by the Migratory Bird Treaty Act of 1918 (16 USC 703-712) and Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds). The project limits include open canopy coniferous forest with an understory consisting mainly of snowbrush, whiteleaf manzanita, and antelope bitterbrush shrubs with smooth brome and pine straw as dominant grass species. Except for the existing roadways and parking lot, suitable foraging and/or potential nesting habitat for migratory birds is found within the action area, as well as adjacent to the action area. Because of vegetation removal throughout the project limits, impacts to nesting migratory birds may occur. To comply with these acts and to avoid any impacts on nesting birds, nest surveys will be performed if vegetation removal would occur during the breeding season (see Appendix D for further information and dates). If birds or nests are observed in the project area or seen during construction, contact the project biologist. Because of frequent human activity in the area and suitable habitat adjacent to the project area, it is unlikely that the Project will have any effect on current or future migratory bird populations in the area that could lead to federal listing of any species.

6.3.2 Wildlife Movement

Overall, the project is not expected to impede or create new barriers for wildlife movement. The proposed project is in an area of heavy human activity and existing roadways. The new access road would slightly fragment existing habitat and possibly disrupt current patterns or behaviors, but it would not introduce barriers (such as right-of-way fencing) that would restrict their movement or ability to cross the road. A stream corridor is located north of the project, but given the high amount of traffic in the area, it is unlikely this area would be used as a migration corridor. Black bears are known to occur within the Tahoe Basin and around the project. With high human activity in the area, it is likely that these bears are already habituated to humans and alternative food sources such as human foods, trash, and other known attractants.

6.3.3 Noxious and Invasive Species

The project limits were surveyed for the presence of noxious weeds during the 2019 field surveys. No weeds from the Nevada Department of Agriculture noxious weed list or the LTBMU invasive plant list have been identified on site. Review of the LTBMU *Terrestrial Invasive Plant Species Treatment Project EA* indicates that bull thistle (*Cirsium vulgare*) was the only noxious weed identified on USFS lands near the project area. Although no noxious weeds were found during field surveys, the implementation of best management practices, consistent with FHWA standard project specifications 107.1(c) which requires contractors to clean all dirt and foreign material before mobilizing equipment and vehicles onsite, maintain inspection records, and follow state and federal land management agency requirements, will aid in preventing the introduction and spread of noxious and invasive species. The use of native seed mix in restoration will further aid in reducing the potential for introduction of these undesirable species.

7.0 Conservation/Minimization Measures

FHWA-CFLHD's *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects* (FP-14) effectively addresses protection of environmental resources and includes standard best management practices. The following project-specific conservation measures would be implemented for the project to further avoid and minimize potential impacts to species.

- Work will occur within bear habitat. During construction, ensure food scraps or other trash or garbage are deposited in covered or closed trash containers. Promptly remove garbage or trash produced from construction activities to avoid creating attractive wildlife nuisances. Recommend storing antifreeze, petroleum products, or other attractants in hard-sided container or storage building. Notify the project manager if any bears are observed or if any animal carcasses are found.
- If vegetation clearing must occur between April 15 and August 31, a qualified biologist will complete pre-construction surveys for active migratory bird nests in all suitable habitat that will be disturbed.
- If active bird nests are identified within the survey area, a qualified biologist will determine the appropriate avoidance strategy, subject to approval by the contracting officer, and determine whether a no-work buffer is required. If necessary, no work shall occur until the young have fledged or the nest is no longer active as determined by a qualified biologist.
- Revegetation seed mix composition will be coordinated with the USFS.

8.0 Summary of Findings

FHWA-CFLHD, in cooperation with LTBMU, NDOT, and TRPA, is proposing highway improvements to the Round Hill Pines Resort access road and US 50 intersection in Douglas County, Nevada. The Round Hill Pines Resort access road would be relocated approximately 0.2 mile further to the north from the existing location. U.S. Highway 50 would be widened at the relocated intersection to accommodate a new median left turn bay and eastbound US 50 acceleration lane. The purpose of the project is to increase safety and improve accessibility for motorists, pedestrians, and bicycles entering and exiting Round Hill Pines Resort from US 50. The action area was evaluated for the presence of, and potential to support, three ESA-listed species and four state SGCN for the potential to occur in the action area:

- North American Wolverine (*Gulo gulo luscus*) – ESA Proposed Threatened
- SNYLF (*Rana sierrae*) – ESA Endangered with Final Critical Habitat, Project site is outside of Final Critical Habitat.
- LCT (*Oncorhynchus clarkia henshawi*) – ESA Threatened
- TYC (*Rorippa subumbellata*) – Nevada SPSC Critically Endangered, NNHP S1
- Fringed Myotis (*Myotis thysanodes*) – Nevada SPSC Protected Mammal, NNHP S2
- Mountain Pocket Gopher (*Thomomys monticola*) – NNHP S3
- Western Jumping Mouse (*Zapus princeps*) – NNHP S2

Based on the onsite field review findings and a desktop research and review, it has been determined that the proposed project would not jeopardize the proposed threatened wolverine, and have **no effect upon**, LCT or SNYLF. In addition, the proposed project *will not jeopardize the continued existence nor lead to a decline in population that could lead to federal listing* of the TYC, fringed myotis, mountain pocket gopher, or western jumping mouse.

9.0 References

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3.5.2 Affected Environment

3.5.2.1 Archaeological and Historical Resources

The following summarizes information contained in the “*Architectural History Report for Round Hill Pines Access Road Improvement Project*” and “*Archaeology Report for the Round Hill Pines Access Road Improvement Project*” written by Jacobs Consulting Group (Jacobs, 2021) for CFLHD. A records search was conducted through the Nevada State Historic Preservation Office, Nevada Cultural Resources Information System (NVCRIS), LTBMU office records, and via consultation with the Washoe Tribe of Nevada. The records search yielded information on previously recorded cultural resources, State Historical Preservation Office (SHPO) eligibility determinations and studies, plot base maps, and site form records on file at the NVCRIS, which administers cultural resources surveys and sites for the state of Nevada.

Table 3.5-1 summarizes the results of the research efforts and shows that nine cultural resource surveys have been conducted within or adjacent to the project Area of Potential Effect (APE) since 1991. The project APE includes all areas of potential disturbance associated with the Proposed Project Alternative. These previous studies and the “*Architectural History Report for Round Hill Pines Access Road Improvement Project*” and “*Archaeology Report for the Round Hill Pines Access Road Improvement Project*” reports identified that no historic or archaeological sites listed or eligible for listing on the NRHP are located within the APE and 20 previously identified sites are located adjacent to the APE, see Table 3.5-2.

Table 3.5-1 Previous Cultural Resource Studies Within 0.5-mile of the APE

Author (Year)	Title	Description	Cultural Resources
Valentine 1991	Archaeological Resources Inventory for the Round Hill State Park Feasibility Study, Douglas County, Nevada SHPO Report #8356	Survey	135 acres surveyed 13 cultural sites reviewed
Drews 1998	Inventory and Evaluation of Cultural Resources for a Timber Harvest Plan on the 223 Acre Tranquility Property, Near Round Hill, Douglas County, Nevada SHPO Report #6931	Survey	223 acres surveyed 2 cultural sites reviewed
Zeier 2002	Archaeological Inventory Report State Route 207, Kingsbury Grade Erosion Control / Archaeological Inventory Lower US 50 Erosion Control - Storm Water Management Master Plan Douglas County, Nevada SHPO Report #22313	Survey	25 acres surveyed 1 cultural site reviewed
Reno & Zeier 2004	Cultural Resources Inventory Report Lower US 50 Erosion Control -- Storm Water Management Master Plan Douglas County, Nevada NSM #DBI_NV_2007_198 SHPO Report #8149	Survey	0 acres surveyed 0 cultural site reviewed
Clark 2006	Archeological Survey of the Proposed Round Hill Water Intake Line Rebuild Project NSM #DBI_NV_2006_136	Survey	2 acres surveyed 0 cultural site reviewed
Zeier 2006	Archaeological Inventory Report State Route 207, Kingsbury Grade Erosion Control / Archaeological Inventory Lower US 50 Erosion Control - Storm Water Management Master Plan Douglas County, Nevada NDOT Undertaking 2010-1234 SHPO Report #5949	Inventory	70 acres surveyed 20 cultural site reviewed
Ludwig 2011	Nevada Stateline-to-Stateline Bikeway: South Demonstration Project Douglas County, Nevada Forest Service Undertaking 2011-1422 SHPO Report #6699	Survey	545 acres surveyed 24 cultural site reviewed
Blustain & Harmon 2012	Cultural Resources Survey of Approximately 36 Acres at 530 U.S. Highway 50, Zephyr Cove, Douglas County, Nevada USACE Undertaking 2012-2339 SHPO Report #8864	Survey	36 acres surveyed 2 cultural site reviewed
Research Archaeology 2012	A Class III Archaeological Inventory for the Kingsbury Regional Fuels Reduction Project, Douglas County, Nevada Undertaking 2012-2077	Inventory	181 acres surveyed 0 cultural site reviewed

4 Source: Jacobs, 2021

Table 3.5-2 Summary of Documented Resources Within 0.5-mile of the APE

Site Number	Description	NRHP Eligibility	In APE?
B1305	Round Mountain Lodge/Round Hill Pines Gate House and Garage	Eligible (demolished) ^a	No
B1306	Round Hill Pines Motel Units	Eligible (demolished) ^a	No
26 DO-451 ^b	Lincoln Highway	Eligible	No
26 DO-660 ^b	Historic Structure	Unevaluated	No
26 DO-669	Bourne Irrigation System	Ineligible	No
26 DO-677	Historic scatter	Ineligible	No
26 DO-678	Prehistoric bedrock milling complex	Unevaluated	No
26 DO-679	Historic scatter	Ineligible	No
26 DO-680	Unnamed road/trail	Ineligible	No
26 DO-681	Historic scatter	Ineligible	No
26 DO-682	Historic scatter	Ineligible	No
26 DO-683	Historic scatter	Ineligible	No
26 DO-684	Round Hill Resort	Unevaluated	No
26 DO-685	Historic isolated find	Ineligible	No
26 DO-687	Historic logging site	Ineligible	No
26 DO-688	Historic scatter	Ineligible	No
26 DO-805	Historic road remnants	Ineligible	No
26 DO-806	Prehistoric isolated bedrock mortar	Ineligible	No
26 DO-1136	McFaul (Bourne's) Meadow Ditch System	Ineligible	No
26 DO-1137	McFaul (Bourne's) Meadow – Historic, multi-use recreational area	Ineligible	No

5 Source: Jacobs, 2021

6 ^a Resource was demolished and apparently has not been reevaluated and/or removed from the NVCRIS GIS data set.

7 ^b Site 26 DO-451 is mapped by NVCRIS with large shape files that do not match with the actual site location. Site 26 DO-451 is parallel to US 50 and not in the APE. Site 26 DO-660 was also imprecisely plotted on the records search map and appears in the APE; however, the site record clearly indicates the site is on private property and outside of the APE.

Native American Consultation

An important element in National Historic Preservation Act, Section 106 compliance includes consultation with parties that might have an interest in or be affected by investigations of or effects on cultural resources. Coordination with LTBMU and TRPA suggested that the Washoe Tribe is the applicable tribal authority for lands encompassing the project area. FHWA-CFLHD formally initiated consultation with the Washoe Tribe of Nevada and California under Section 106 of the National Historic Preservation Act via letter to Mr. Smokey Serrell dated July 6, 2020 (Appendix B). Washoe Tribal Council members were also invited to attend and participate in public meetings for the project on April 23, 2019 and September 25, 2019. No comments were received from the Washoe Tribe in response to the tribal consultation letter or during the public meetings.

Field Investigation

The project APE was subject to an intensive pedestrian survey on July 29 and 31, 2019 and covered approximately 8.9 acres with 10 to 15 meter transects. The survey included an examination of the ground surface, exposed rock surfaces, structures, and cultural debris and included close examination of exposed sediments, cut-banks, graded areas, animal burrows, animal and human trails, and other areas where native soils were exposed. The pedestrian survey

also involved inspection of the local topography to identify areas that have been subject to modern anthropogenic landscape alterations within the APE. No materials were collected. Build-environment resources that were 50 years old or older were documented with digital photography, described, and measured. Two previously unrecorded sites were documented within the APE and consist of a stone entrance wall/gate into the Round Hill Pines Resort and utility poles, see Table 3.5-3.

Table 3.5-3 Summary of Cultural Resources, Potential Impacts and Significance

Cultural Resources Description	Potential Impact	Significance
Utility Poles	Yes	*Not Eligible
Round Hill Pines Resort Gate and Stone Wall	Yes	*Not Eligible

* A final determination of eligibility is pending concurrence by the Nevada Office of Historic Preservation.

Source: Jacobs, 2021

3.5.3 Environmental Consequences and Mitigation Measures

Significance Criteria

The significance of a cultural resource is typically evaluated in terms of criteria established in the NRHP, as authorized under the NHPA, as amended. Federal criteria (A through D) focus on a heritage property's associations with significant events and personalities in the nation's history and cultural heritage; its distinctive technical, architectural or artistic characteristics; and/or a property's information potential. Resources are evaluated within a specific and important time frame or period of significance during which time the property was occupied or used.

To be listed in the NRHP, a property must not only be shown to be significant under one or more of these criteria, but it must also have integrity. TRPA has adopted procedures for the identification, recognition, protection, and preservation of the region's significant cultural, historical, archaeological, and paleontological resources that are modeled after the NRHP guidelines. Chapter 67 of the TRPA Code requires a site survey by a qualified archaeologist, an inventory of any extant cultural resources, and consultation with the Washoe Tribe. The TRPA Initial Environmental Checklist was used to guide evaluation of the project's effects on archaeological and historical resources under TRPA regulations. The context and intensity of an alternative's potential to adversely affect archaeological and historical resources were evaluated based on the following:

- Would the project result in an alteration of or adverse physical or aesthetic effect to a significant archaeological or historical site, structure, object or building?
- Is the project located on a property with any known cultural, historical, and/or archaeological resources, including resources on TRPA or other regulatory official maps or records?
- Is the property associated with any historically significant events and/or sites or persons?
- Does the project have the potential to cause a physical change which would affect unique ethnic cultural values?
- Will the project restrict historic or pre-historic religious or sacred uses, or alter unique paleontological resources, within the potential impact area?

Methods and Assumptions

Project-related actions undertaken by FHWA-CFLHD are subject to compliance with Section 106 of the NHPA and its implementing regulations (36 CFR Part 800), as amended. Section 106 constitutes the main regulatory framework guiding cultural resource investigations for federal undertakings. The Section 106 review process involves a four-step procedure:

- Initiate the Section 106 process by establishing the APE for the undertaking, developing a plan for public involvement and identifying other consulting parties.
- Identify cultural resource properties (sites, districts, buildings, objects, traditional cultural properties, etc.) by inventorying and evaluating their eligibility for inclusion in the NRHP.
- Assess any potential adverse effects on properties that are listed in or may be eligible for listing in the NRHP by applying the criteria of adverse effect (noted in 36 CFR Part 800).
- Resolve potential adverse effects by consulting with the SHPO and other consulting agencies, including the Advisory Council of Historic Preservation if necessary, to develop an agreement that addresses the proper treatment of historic properties.

As described above, the stand-alone inventory and evaluation report was prepared based on an APE that included all areas of potential disturbance associated with the Round Hill Pines Access Project. The inventory of cultural resources was based on a thorough research of previous studies within the APE and a comprehensive field investigation by qualified archaeologists. Based on these efforts, Table 3.5-2 and Table 3.5-3 includes significance assessments of cultural resources inventoried within or near the Round Hill Pines Access Project APE. None of the recorded sites within the APE are found to be NRHP eligible.

3.5.3.1 No Action Alternative

Under the No Action Alternative, there would be no construction-related ground disturbance that could result in adverse effects to undiscovered buried archaeological, historical, or human remains.

3.5.3.2 Proposed Project Alternative

Section 106 of the NHPA requires that federal agencies consider the effects of their actions on significant archaeological properties before implementing a project (i.e., undertaking). Federal regulatory impact thresholds are found in 36 CFR 800. Regulations require that the federal agency apply the criteria of adverse effect to heritage properties that would be affected by a proposed undertaking (36 CFR Part 800.9b). The criteria of adverse effect, defined at 36 CFR Part 800.5(a)(1), states that:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Section 67.7.3 of the TRPA Code also requires the protection of sites, objects, structures, or other resources designated as historic resources or for which designation is pending. Demolition, disturbance, removal, or significant alterations are prohibited unless TRPA has approved a resource protection plan to protect the historic resources.

If a cultural resource is not a unique archaeological or a historical resource and if it is determined not eligible to the National Register, the effects of a project on the resource are not considered to be a significant effect on the environment. It is sufficient that both the resource and the effect on it are noted in the environmental document, but they need not be considered further in the Section 106 process.

None of the cultural resources recorded within the APE meet NRHP criteria of significance and none are considered eligible resources. All of their potentially significant information has been recovered with the completion of Intermountain Antiquities Computer System (IMACS) archaeological site record forms that accompany the standalone inventory and evaluation report (Jacobs 2021). Therefore, the Proposed Project Alternative would not have an adverse effect on any significant properties potentially eligible for the NRHP and a determination of “No Historic Properties Affected” was recommended in the inventory and evaluation report.

Archival research, Native American consultation, and intensive field survey conducted within the APE indicate that the area is not likely to contain cultural resources that may be buried or otherwise not visible on the ground surface. However, the potential exists that undocumented and concealed prehistoric or historic-era sites, structures, features, artifacts, or human interments could be present and encountered during project-related ground-disturbing activities. If previously undiscovered and significant (per NRHP/TRPA criteria) archaeological or historical resources or human remains were disturbed by construction, this would be an adverse effect. However, implementation of proposed design features would reduce or avoid potential construction-related disturbances to undocumented resources and human remains, such that the Proposed Project Alternative would not result in an adverse effect to these resources.

3.5.3.3 Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to cultural resources. The full description of the Proposed Project avoidance, minimization, and/or mitigation measures is provided in Table 3.13-1.

Mitigation Measure CR-1. Cease work and implement notification procedures for previously undiscovered archaeological and historical resources.

3.5.3.4 SHPO Concurrence

The request for concurrence on eligibility and effect determinations will be transmitted to Nevada SHPO with a copy of the cultural resource report prepared for this project. Coordination with SHPO is ongoing and will be completed prior to issuance of a decision document.

3.6 Earth Resources: Geology, Soils, Land Capability and Coverage

This section evaluates potential impacts relating to the existing geologic and soil conditions within the project area and an analysis of the potential geologic hazards and soils impacts associated with project implementation. The analysis includes a description of existing conditions, a discussion of any changes in or to geologic conditions, relevant soil properties, and a discussion of land capability and coverage. Potential environmental effects related to water quality resulting from soil erosion and other stormwater effects are addressed in Section 3.7, "Hydrology and Water Quality."

3.6.1 Regulatory Setting

3.6.1.1 Tahoe Regional Planning Agency

Based on TRPA's Initial Environmental Checklist, effects related to land were also evaluated based on whether the Proposed Project Alternative would:

- Compact or cover soil beyond the limits allowed in Chapter 30 of the TRPA Code;
- Result in a change in the topographic features of the site inconsistent with the natural surrounding conditions;
- Change the undisturbed soil or native geologic substructures or grading in excess of 5 feet, unless TRPA makes the findings set forth in Section 64.7.B of the TRPA Code, in which case such grading is permissible;
- Continue or increase wind or water erosion of soils;
- Result in changes in situation, deposition, or erosion that could modify the channel of a river or stream or the bed of a lake;
- Result in unstable soil conditions during or after completion of the project; or
- Expose people or property to geologic hazards such as earthquakes, landslides, avalanches, or similar hazards.

TRPA goals and policies are designed to achieve and maintain adopted environmental threshold carrying capacities, and are implemented through the TRPA Code of Ordinances. A combination of relevant TRPA thresholds, goals, policies, and ordinances were used to analyze potential effects from the Proposed Project Alternative on cultural resources.

3.6.2 Affected Environment

Geology

The project area is located in the Cascade-Sierra Mountains Province of the Pacific Mountain System. The Sierra Nevada is a tilted fault block with a gentle western slope and a steep, rugged eastern escarpment. It runs through eastern California and a small portion of western Nevada, from the Mojave Desert in the south to the Cascade Range and Modoc Plateau on the north, for more than 400 miles and averages 50 to 80 miles wide. The Sierra Nevada geomorphic province is primarily composed of massive granitic bedrock and remnants of metavolcanic and metasedimentary rocks (volcanic and sedimentary rocks subsequently subjected to substantial heat and pressure), and more recent volcanic and sedimentary rocks. It is bounded on the west by sedimentary rocks of the Great Valley geomorphic province and on the north by volcanic sheets extending south from the Cascade Range (California Department of Conservation, California Geological Survey [CGS] 2005).

The Lake Tahoe Basin is located in the northern Sierra Nevada, between the Sierra crest to the west and the Carson Range to the east, and is one of the most prominent mountain ranges in

California. Faulting and volcanism created the Lake Tahoe Basin over 2 million years ago, and as a result, the basin contains granitic, metamorphic, and volcanic rock (Saucedo 2005). The predominant bedrock in the Tahoe Basin is Cretaceous granodiorite of the Sierra Nevada batholith. Cretaceous rock formed during the later period of the Mesozoic Era, characterized by the development of flowering plants and ending with the sudden extinction of the dinosaurs and many other forms of life. Pre-Cretaceous metamorphic rocks are found in localized areas. Over the past 1.5 million years, the Lake Tahoe Region has been altered by glacial activity, and most of the landforms surrounding the lake are a result of glaciation. During glacial activities, valley glaciers dammed the Truckee River Canyon, raising the water level of Lake Tahoe. Lacustrine sediments were deposited in the bays and canyons around the lake as a result of the rising lake levels. The faulting, folding, and in some cases overturning of rock formations that has taken place during various periods of geologic activity, in combination with erosion, deposition, and subsequent cementation of rock materials that occurred during relatively quiet periods, have left a complex arrangement of geologic rock types and structures in the area. However, the extraordinary clarity of Lake Tahoe is related to the prevalence of resistant granitic bedrock in the Lake Tahoe Basin and the unusually small drainage basin relative to the size of Lake Tahoe.

The project area is mapped as underlain by Pleistocene Lacustrine Terrace Deposits and Cretaceous Granodiorite of East Peak. The lacustrine deposits are described as poorly to moderately sorted silt, sand, and gravel forming broad low terraces 5 to 10 meters above lake level. The granodiorite is described as fine- to medium-grained, well-foliated, equigranular to weakly porphyritic hornblende-biotite granodiorite to quartz monzodiorite. Undivided granite and granodiorite and quartz diorite and diorite are also mapped in the vicinity of the project area. These units are described as fine- to coarse-grained with various compositions and potential origins.

Topography

Slope of the land is an important consideration in development planning. Slopes, in conjunction with soil types, geological and seismic hazards, and scenic vistas, are potential limitations to development. Typically, challenges associated with development on slight slopes are minimal. Development on steep slopes, hillsides, and ridgelines have greater potential for erosion problems, have lower rates of revegetation, can degrade the aesthetic value of the natural environment and can also represent hazards to the land itself.

The project area is located on the Freel Peak, California 7.5 minute U.S. Geological Survey (USGS) quadrangle map. The topography of the project site slopes from the east and northeast to the west and southwest. The project area is located between the elevations of 6,240 feet and 6,500 feet above mean sea level (amsl). The hill slopes throughout the project area range from 2 to greater than 50 percent (Table 4.5-1). Significant geographic features along this segment include Tunnel Creek and Bonpland Creek, both of which run through steep ravines into Lake Tahoe.

Seismicity

The potential for seismic activity at a given project location is most often related to the proximity of faults, which are fractures or zones of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. Most faults are the result of repeated displacement that may have taken place suddenly and/or by slow creep (Bryant and Hart 2007: p. 3).

Lake Tahoe lies within a tectonically active, asymmetric half-graben (down-dropped fault block). Evidence shows that pre-historic earthquakes of a magnitude of 7.0 have occurred on Tahoe Basin faults within the past 10,000 years. However, scientists believe that large quakes are “rare events” in the Tahoe Basin, meaning quakes of magnitude 6.5 or greater occur on individual faults about every 3,000 to 4,000 years (Segale and Cobourn 2005: p. 1). Numerous seismic source faults are mapped within 40 miles of the project area. These faults are generally oriented north-

south and located both east and west of the project site. Most of the faults have been active in the Holocene (less than 15,000 years ago) and have slip rates between 0.008 and 0.08 inches per year.

Tsunami/Seiche

A tsunami is a series of waves that may result from a major seismic event that involves the displacement of a large volume of water and can occur in any large body of water. A seiche is a periodic oscillation of an enclosed or restricted water body, typically a lake or reservoir, produced by seismic shaking or massive landslide (above ground or underwater). A seiche results in a potentially damaging wave, similar to a tsunami, which may result from seismic activity near a large lake. A seiche may occur in (wave) periods that differ from a tsunami. But should the period of wave propagation occur simultaneously with a tsunami, it could result in cumulative seismic-related wave effects.

Soils

Soils are a critical element in land-use planning and environmental analyses in the Lake Tahoe Region; the TRPA land capability districts are determined based on soil types. The Natural Resources Conservation Service (NRCS) 2007 Soil Survey update shows four soil map units within the project area. The Cagwin and Cassenai soil types dominate these map units.

Cagwin and Cassenai are deep to very deep soils. The upper horizons are typically composed of gravelly loamy coarse sands that occur as mixed colluviums (material relocated by gravity) over residuum (material that has weathered in place) derived from the weathering of granodiorite, underlain by grus (actively decomposing granitic material) (NRCS 2007). These soils are highly permeable and somewhat excessively drained. This means that water moves quickly through the soil profile and away from the root zone of plants. These coarse textured granitic soils are notoriously droughty and have low or very low water holding capacity in the upper 60 inches.

Both the Cagwin and Cassenai soils have very little structure in the upper horizons and are underlain by massive, dense but brittle, cemented grus. Disturbance of these soils in steep areas, especially when it involves the lower horizons, can lead to chronic sloughing and erosion. This type of structure, combined with their limited water holding capacity, can make successful revegetation of these soils a challenge in steep areas.

The NRCS Erosion Hazard rating for the soil located within the project area estimates the risk of soil loss from sheet and rill erosion (erosion caused by overland flow of water) for disturbed soils where 50 to 75 percent of the soil surface has been exposed. This rating is based on slope and soil erosion factor K. Since the project area soils are structurally similar, the Erosion Hazard rating is driven by slope. Within the project area, soils on 2 to 15 percent slopes are rated as "slight," soils on 15 to 30 percent slopes are rated as "moderate," soil on 30 to 50 percent slopes are rated as "severe," and soil with greater than 50 percent slopes are rated as "very severe."

Table 3.6-1, which is based on NRCS soil survey data (NRCS 2007), lists the soil types and soil characteristics present within the Round Hill Pines Access Project area.

Table 3.6-1: Soils within the Round Hill Pines Access Project Area

Soil Map Unit Name	% in Project Area	Shrink Swell Potential ¹	Permeability ²	Erosion Hazard Rating ³	Drainage	Concrete corrosivity
Cagwin Rock Outcrop Complex, 5-15% slopes, extremely stony	56.5%	Low	High	Moderate	Somewhat excessively drained	Low
Cagwin Rock Outcrop Complex, 15-30% slopes, extremely stony	14.6%	Low	High	Moderate	Somewhat excessively drained	Low
Cassenai gravelly loamy coarse sand, 5-15% slopes, very stony	25.9%	Low	High	Moderate	Somewhat excessively drained	Low
Cassenai gravelly loamy coarse sand, 15-30% slopes, very stony	3.1%	Low	High	Moderate	Somewhat excessively drained	Low
Notes: ¹ Based on percentage of linear extensibility. Shrink-swell potential ratings of "moderate" to "very high" can result in damage to buildings, roads, and other structures. ² Based on standard U.S. Department of Agriculture (USDA) saturated hydraulic conductivity (Ksat) class limits; Ksat refers to the ease with which pores in a saturated soil transmit water. ³ Based on slope and soil erosion factor K. The erosion hazard rating estimates the risk of soil loss due to sheet and rill erosion after disturbance activities that expose 50 to 75 percent of the soil surface. Source: NRCS 2007						

Land Capability and Coverage

Chapter 30 of the TRPA Code of Ordinances sets forth regulations for the permissible amount of land coverage in the region. It implements provisions of the Goals and Policies concerning the land capability system, land capability districts (LCDs), prohibition of additional land coverage in certain LCDs, and transfer and mitigation of land coverage. The LCDs within the project area are 2 and 4 (Bailey 1974).

The majority of the project area is within LCD 4 (base allowable coverage of 20 percent) and a small portion of the project area is within 2 (base allowable coverage of 1 percent). There are no SEZ or backshore areas located within the project area. Existing coverage within the project area includes the existing US 50 transportation corridor and the Round Hill Pines Resort area, which contains a series of paved roads, pedestrian trails and parking areas.

3.6.3 Environmental Consequences and Mitigation Measures

Evaluation of potential geologic and soils impacts was based on a review of documents pertaining to the project site, including the draft Round Hill Pines Access Road Project Geotechnical Investigation Report, the NRCS Soil Survey of Tahoe Basin Area (NRCS 2007) and TRPA regulations and planning documents. The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the regulatory setting mentioned in Section 3.6.1.1. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, state, and local ordinances and regulations.

3.6.3.1 No Action Alternative

Under the No Action Alternative, there would be no construction related ground disturbance along US 50 or within the Round Hill Pines Resort. The US 50 transportation corridor, the Round Hill Pines Resort access road, and US 50 intersection would not be relocated to the north and the access road would remain in the existing location. However, there would be continued public use of the Round Hill Pines Resort area as well as required maintenance and improvements.

3.6.3.2 Proposed Project Alternative

Seismic and Geologic Features

Lake Tahoe lies in an inter-montane basin bounded by normal faults. Active faults are located in the project vicinity. According to the Earthquake Potential Map for Portions of Eastern California and Western Nevada (Saucedo 2005, CGS 2005), the Zephyr Cove area is considered to have a moderate potential for shaking caused by seismic-related activity (CGS 2005). The Proposed Project Alternative would include construction of a new access road to the Round Hill Pines Resort and widening along a segment of US 50. Areas of steep side slopes are present along the west side portion of US 50 within the project area. The project does not include the construction of any buildings intended for human occupation, bridge structures, or retaining walls.

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Liquefaction poses a hazard to engineered structures. The loss of soil strength can result in bearing capacity insufficient to support foundation loads, increased lateral pressure on retaining walls, and slope instability.

The soils within the project area are coarse textured with a high rock content and low water holding capacity. These features combined with the high depth to groundwater create little potential for liquefaction to occur within the project area. However, proposed project structures would be designed and constructed in accordance with the current design requirements of UBC Seismic Zone 3 and NDOT that are intended to reduce the risk of injury or property damage from seismic hazards, including strong ground shaking and liquefaction.

Ichinose et al. (2000) show through simulations modeling wave propagation for various earthquake scenarios that if a large earthquake were to occur (approximately magnitude 7.0), a potential exists for both tsunami and seiche-related waves up to 30 feet to occur along the shore of Lake Tahoe. The Proposed Project Alternative is located outside the 30-foot wave range therefore, implementation of the proposed project alternative would not create a situation that exposes additional people to tsunami or seiche hazards.

No previous landslides have been mapped in the location of planned project facilities, however some granitic soils within the project area may be prone to instability once disturbed. Design features incorporated into the project would minimize the disturbance footprint to the greatest

extent possible and stabilize disturbed areas. Additionally, a detailed geotechnical report would be conducted prior to final design to identify any slope instability issues and the maximum slope for construction to occur. The project will include preparation of a Geotechnical Report by a registered professional geologist or engineer that will be used to develop the final design of all project components to ensure that the potential for landslides, slope instability, seismic events, and all applicable codes and seismic standards are adequately addressed in the design and construction of the project.

Implementation of the design features described above would ensure that implementation of the project would not result in the creation of unstable slopes that would subject recreational users to an increased hazard.

Site Topography, Grading and Soil Erosion

Construction of the Proposed Project Alternative will require minimal excavation. The project limits along the east side of US 50 will generally follow the existing contours. No cuts will be made to the hillside along the east side of the project area. Excavation will be required along the existing Round Hill Pines Resort access road and a segment of the bike trail to obliterate and remove old pavement. Excavation depths are not expected to exceed approximately 5 feet. Placement of fill material will be required for construction of the relocated Round Hill Pines Resort access road and widening along the west side of US 50 for the median left turn bay and acceleration lane.

As noted in Table 3.6-2, a majority of the project is located on soils that contain 15% or less slope. The project area is also dominated by granitic soils, which can be difficult to stabilize once disturbed. Construction activities would result in the temporary disturbance of soil and would expose disturbed areas to potential storm events. Rain of sufficient intensity and duration could dislodge soil particles, generate runoff, and cause localized erosion. Soil disturbance during the summer months could result in loss of topsoil because of wind erosion or thundershower event.

The NRCS Erosion Hazard rating for the soils within the project area estimates the risk of soil loss from sheet and rill erosion (erosion caused by overland flow of water) for disturbed soils where 50 to 75 percent of the soil surface has been exposed (NRCS 2007). Soils on 2 to 15 percent slopes are rated as "slight," soils on 15 to 30 percent slopes are rated as "moderate,". A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed.

The potential for increased wind and water erosion of the soils within the project area would be minimized through design features incorporated into the project. All areas disturbed during project construction would be stabilized. Disturbed areas outside of the roadway footprint with less than 20 percent slopes would be restored and revegetated. In areas with slopes between 20 and 30 percent, the soil would be stabilized using a combination of biotechnical and revegetation methods which may include planted geotextiles (an engineered soil stabilization fabric anchored with plants) or rock reinforcement in isolated areas.

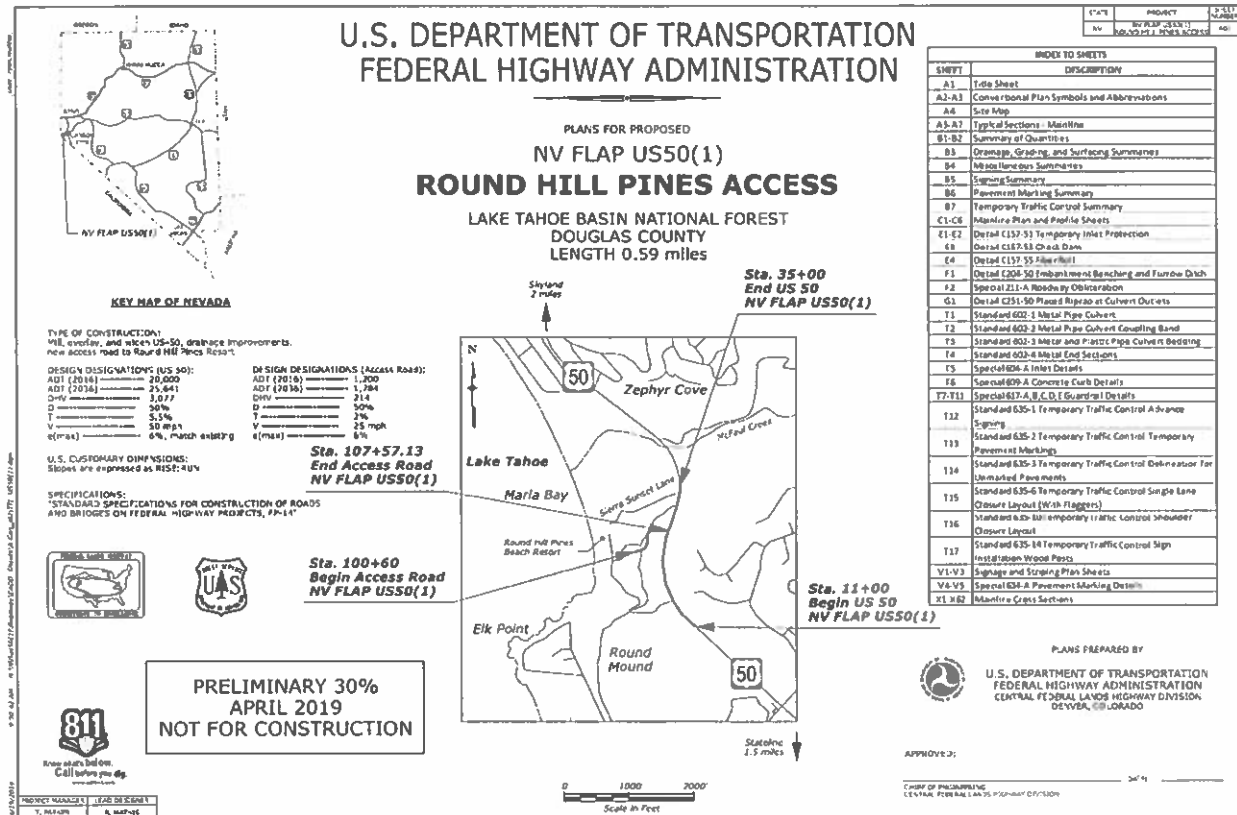
Design features incorporated into the project would: minimize soil erosion by limiting surface disturbance to between May 1 and October 15; require implementation of temporary and permanent water quality BMPs; use existing disturbed areas for staging and storage; restore soil function and organic matter post project implementation; and restore protective ground and vegetative cover (see Table 13.1-1 Mitigation Measures BIO-4 and BMP-1 through BMP-3).

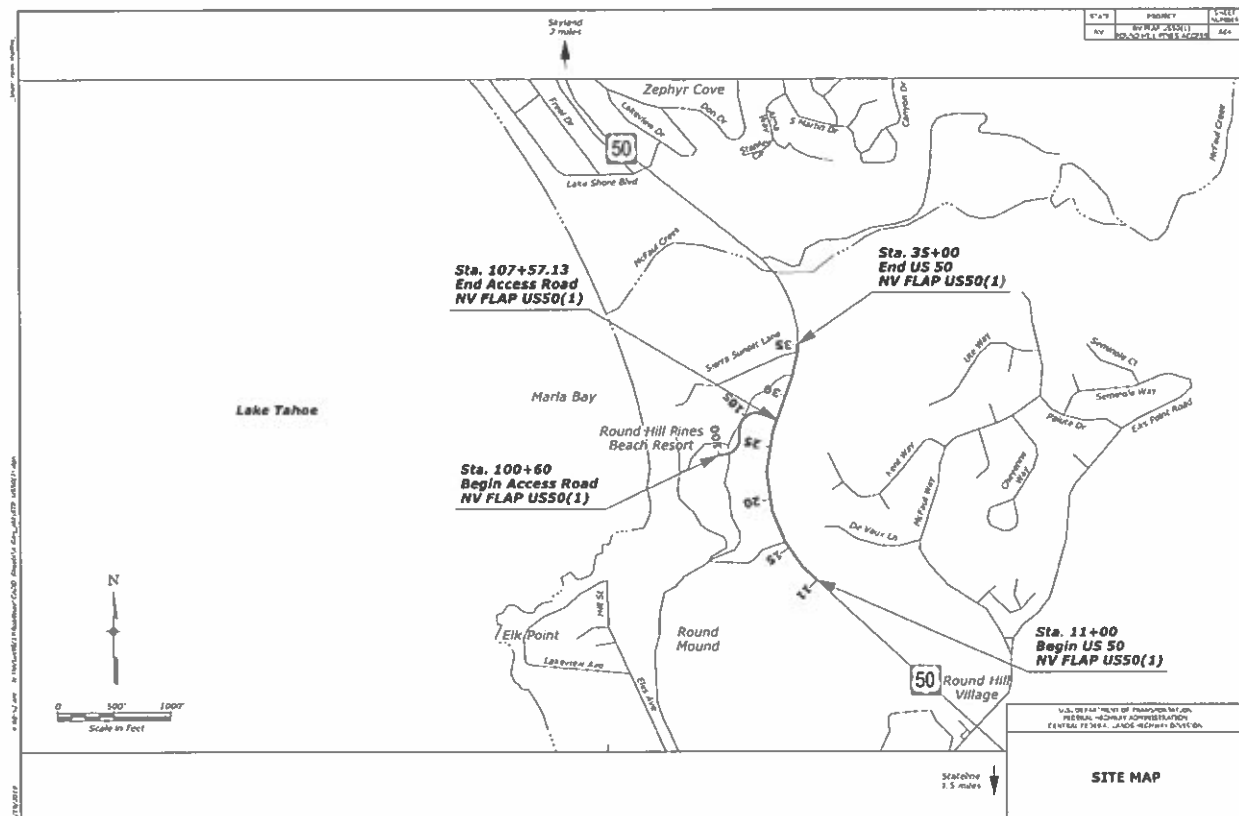
Land Coverage

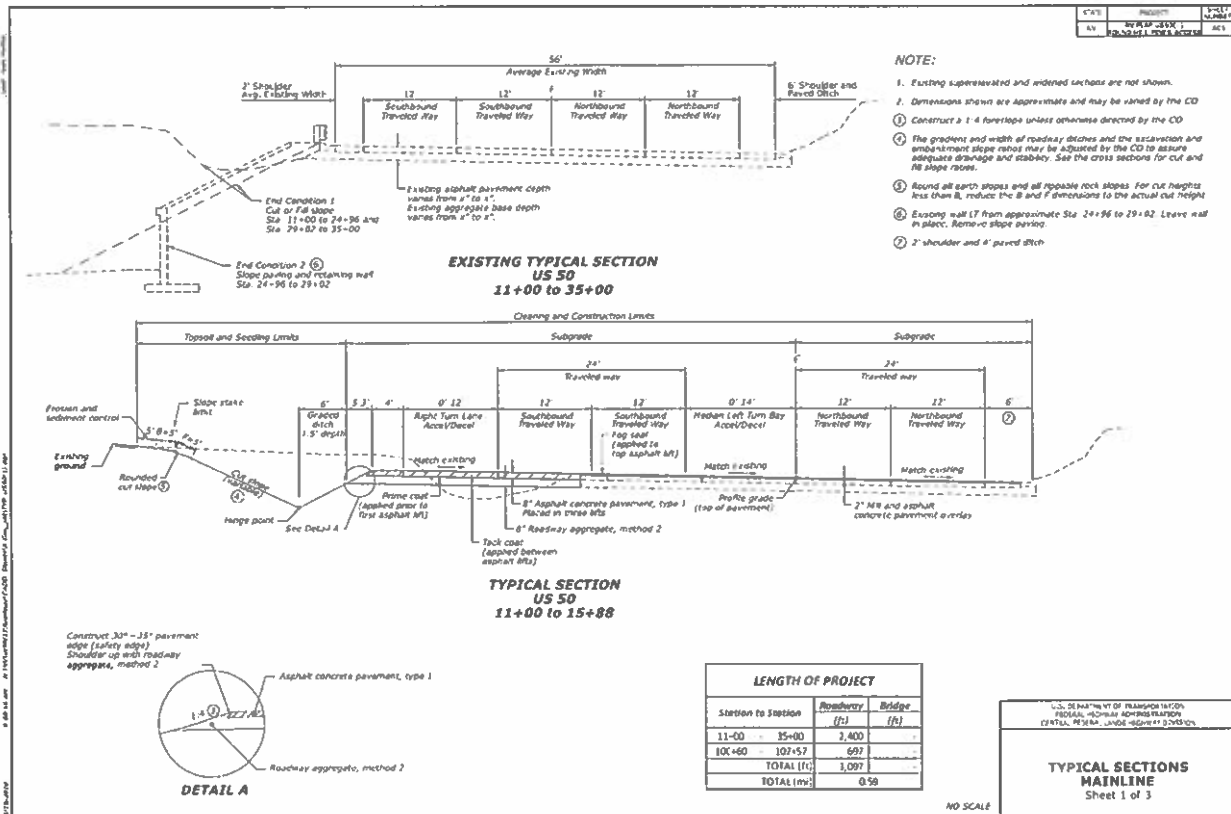
Final design features and landscape restoration incorporated into the Proposed Project Alternative would limit effects to sensitive land capability district (LCD 2). Table 3.5-2 provides a preliminary summary of coverage increases by LCD for the Proposed Project Alternative. The preliminary coverage numbers would be refined as the design process progresses and prior to

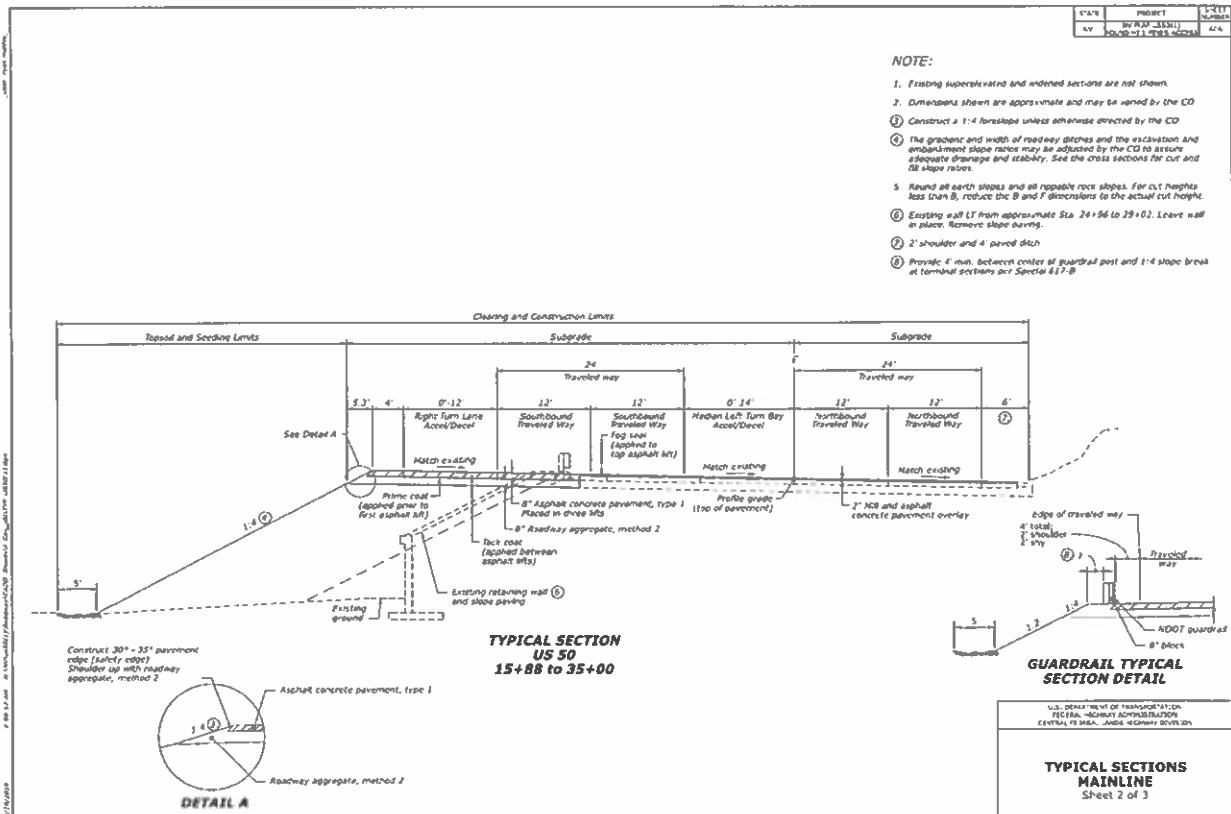
Appendix A

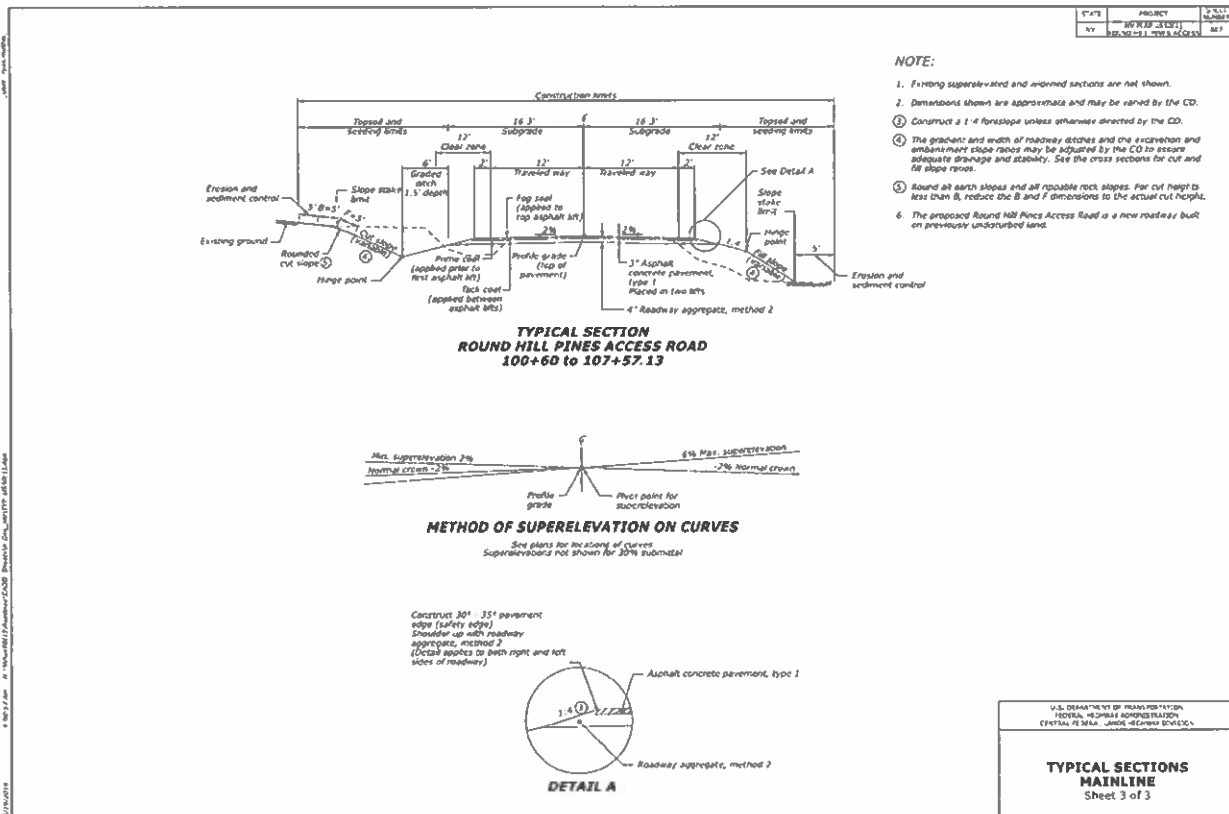
Project Design Figures

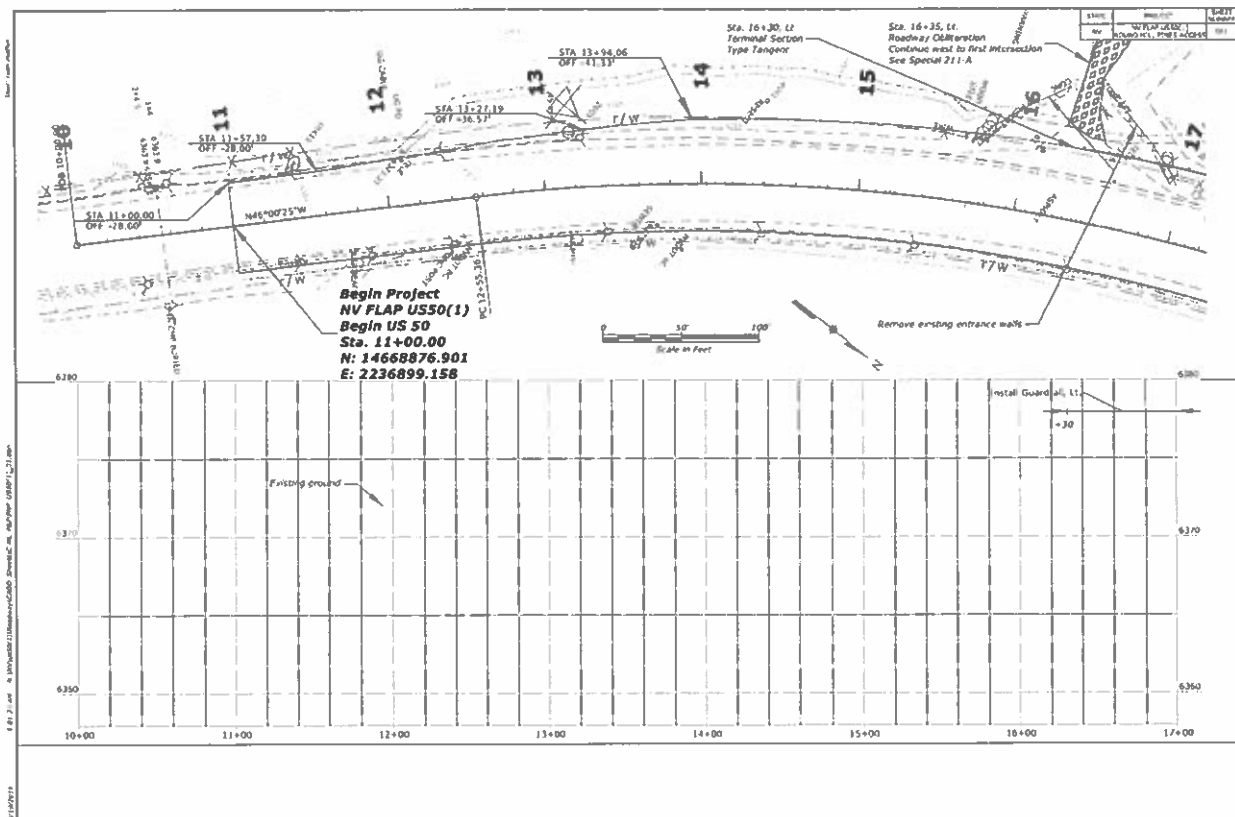


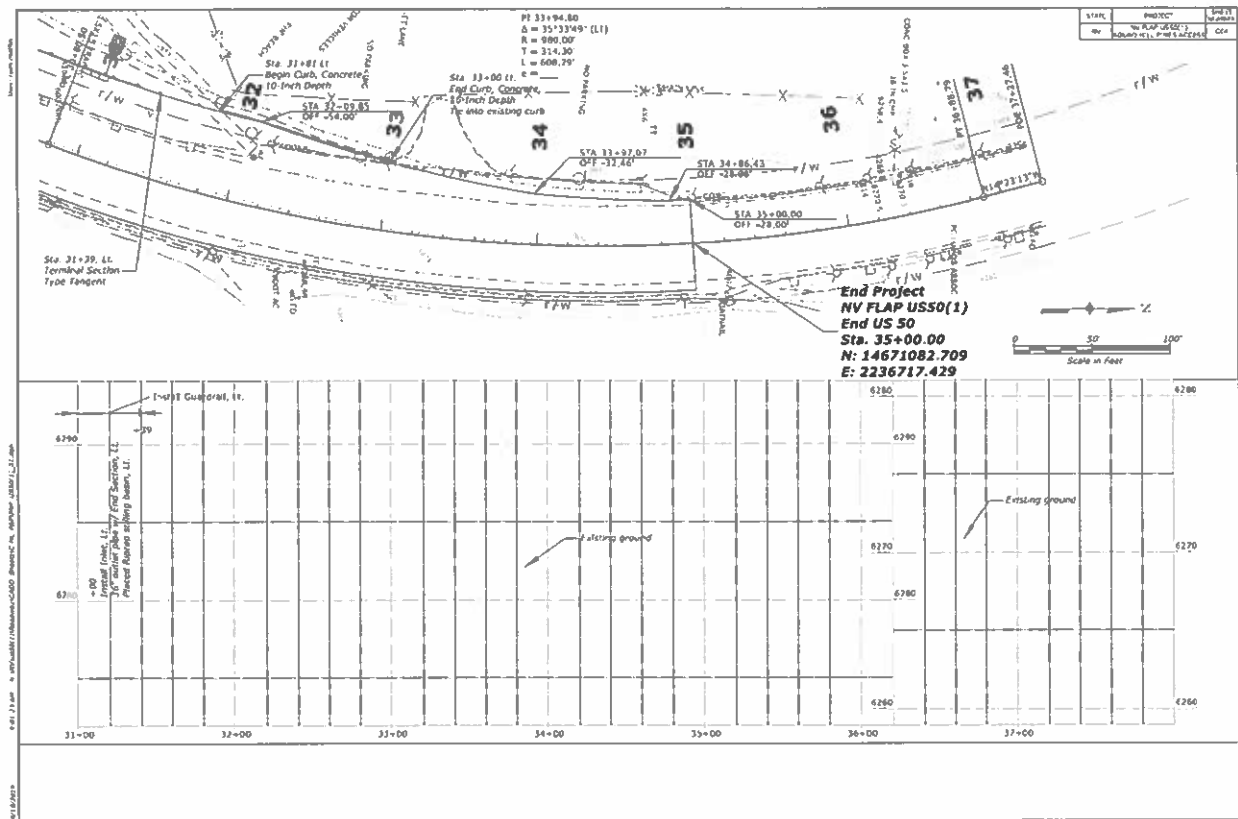












Appendix B

Agency Coordination



STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
Nevada Natural Heritage Program

Steve Sisolak
Governor

Bradley Crowell
Director

Kristin Szabo
Administrator

14 June 2019

Brett Hartmann
Jacobs
9191 South Jamaica Street
Denver, CO 80112

RE: Data request received 13 June 2019

Dear Mr. Hartmann:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or at risk plant and animal taxa recorded within or near the Round Hill Pines Project located in Douglas County. We searched our database and maps for the following, a two kilometer radius around:

Township 13N Range 18E Section 15

The enclosed printout list the taxa recorded within the given area. The Lahontan cutthroat trout, *Oncorhynchus clarkii henshawi*, a Federally Threatened Taxon is known to occur in Lake Tahoe and several tributaries to the lake, and should be considered if disturbances are anticipated in the area. Additionally, all sandy beach habitat around Lake Tahoe is potential habitat for Tahoe yellowcress (*Rorippa subumbellata*), a State protected species. When disturbance or alteration of such habitat is anticipated, surveys for Tahoe yellowcress to determine potential impacts should be conducted at times of year appropriate to its detection, and avoidance or mitigation measures should be considered. The Nevada Department of Wildlife (NDOW) manages, protects, and restores Nevada's wildlife resources and associated habitat. Please contact Bonnie Weller, NDOW GIS Biologist (775 688-1439) to obtain further information regarding wildlife resources within and near your area of interest. Removal or destruction of state protected flora species (NAC 527.010) requires a special permit from Nevada Division of Forestry (NRS 527.270).

Please note that our data are dependent on the research and observations of many individuals and organizations and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,


Eric S. Miskow
Biologist/Data Manager
Prepared by Kim Williams (Biologist III)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
<http://www.fws.gov/nevada/>



In Reply Refer To:

May 29, 2019

Consultation Code: 08ENV000-2019-SLI-0440

Event Code: 08ENV000-2019-E-01132

Project Name: CFLHD - Round Hill Pines

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq.*), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit <http://www.fws.gov/nevada/es/ipac.html>.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

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designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (<http://heritage.nv.gov>). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

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Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (<http://www.leg.state.nv.us/NAC/NAC-503.html>). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit <http://www.ndow.org> or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (e.g., changes in blade cut-in speed, assessments of blade "feathering" success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (<http://www.aplic.org/>) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq.*), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to

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avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

If wetlands, springs, or streams are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
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Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO

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Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

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Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO

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San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO

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Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO

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Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

Office Leads:*AFWO=Arcata Fish and Wildlife Office****BDFWO=Bay Delta Fish and Wildlife Office****KFWO=Klamath Falls Fish and Wildlife Office****RFWO=Reno Fish and Wildlife Office****YFWO=Yreka Fish and Wildlife Office****Attachment(s):**

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

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Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Lahontan Cutthroat Trout <i>Oncorhynchus clarkii henshawi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf	Threatened

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Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

-
1. The Migratory Birds Treaty Act of 1918.
 2. The Bald and Golden Eagle Protection Act of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15

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NAME	BREEDING SEASON
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31
Willow Flycatcher <i>Empidonax traillii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for

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that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (●)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (h)

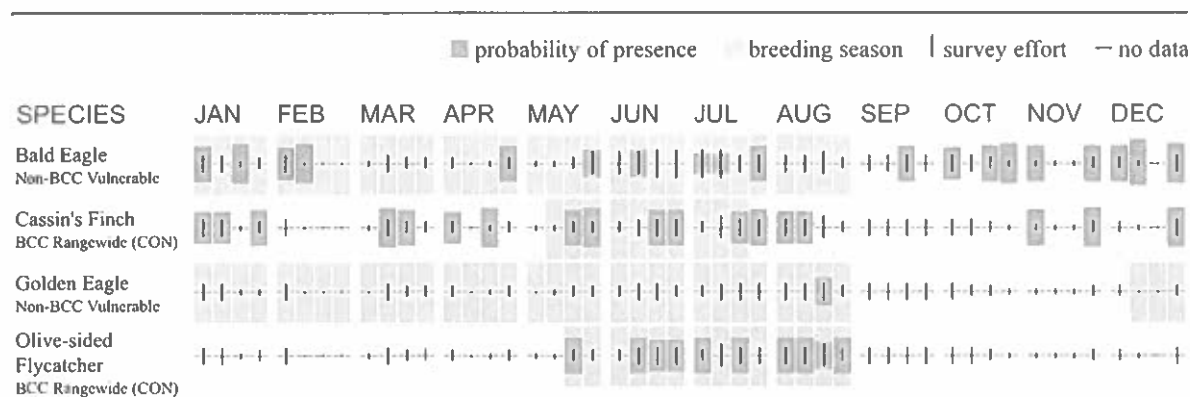
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

[illegible]

Olive-sided
Flycatcher
BCC Ringwide (CON)

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Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

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Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

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Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
<http://www.fws.gov/nevada/>



In Reply Refer To:

July 15, 2020

Consultation Code: 08ENV000-2019-SLI-0440

Event Code: 08ENV000-2020-E-01432

Project Name: CFLHD - Round Hill Pines

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq.*), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit <http://www.fws.gov/nevada/es/ipac.html>.

The purpose of the ESA is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or

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designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally, as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation, for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (<http://heritage.nv.gov>). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

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Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (<http://www.leg.state.nv.us/NAC/NAC-503.html>). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit <http://www.ndow.org> or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Service's wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (e.g., changes in blade cut-in speed, assessments of blade "feathering" success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (<http://www.aplic.org/>) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq.*), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to

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avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving communications towers (*e.g.*, cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

If wetlands, springs, or streams are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
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Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO

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Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

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Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO

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San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO

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Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO

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Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

Office Leads:*AFWO=Arcata Fish and Wildlife Office****BDFWO=Bay Delta Fish and Wildlife Office****KFWO=Klamath Falls Fish and Wildlife Office****RFWO=Reno Fish and Wildlife Office****YFWO=Yreka Fish and Wildlife Office****Attachment(s):**

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

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Project Summary

Consultation Code: 08ENV00-2019-SLI-0440

Event Code: 08ENV00-2020-E-01432

Project Name: CFLHD - Round Hill Pines

Project Type: TRANSPORTATION

Project Description: Round Hill Pines Access is located on Route 50, in Zephyr Cove, NV. Round Hill Pines entrance at US 50 - Forest Service has identified opportunity to reconfigure current highway entrance to resort because of its precarious location. The proposed action will include the relocation of the entrance road to the north and providing a northbound left turn lane and northbound acceleration lane along US 50. The US 50 through lanes will remain 12 feet wide, the median left turn bay/acceleration lane will be 12 feet wide , and the shoulders will remain 4 feet (west) and 6 feet wide (east) to match existing widths. Acceleration/deceleration lanes along SB US 50 will not be part of the proposed action.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.990390729725306N119.9507042634491W>



Counties: Douglas, NV

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Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Lahontan Cutthroat Trout <i>Oncorhynchus clarkii henshawi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf	Threatened

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Conifers and Cycads

NAME	STATUS
Whitebark Pine <i>Pinus albicaulis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1748	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

-
1. The Migratory Birds Treaty Act of 1918.
 2. The Bald and Golden Eagle Protection Act of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15

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NAME	BREEDING SEASON
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31
Willow Flycatcher <i>Empidonax traillii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for

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that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (l)

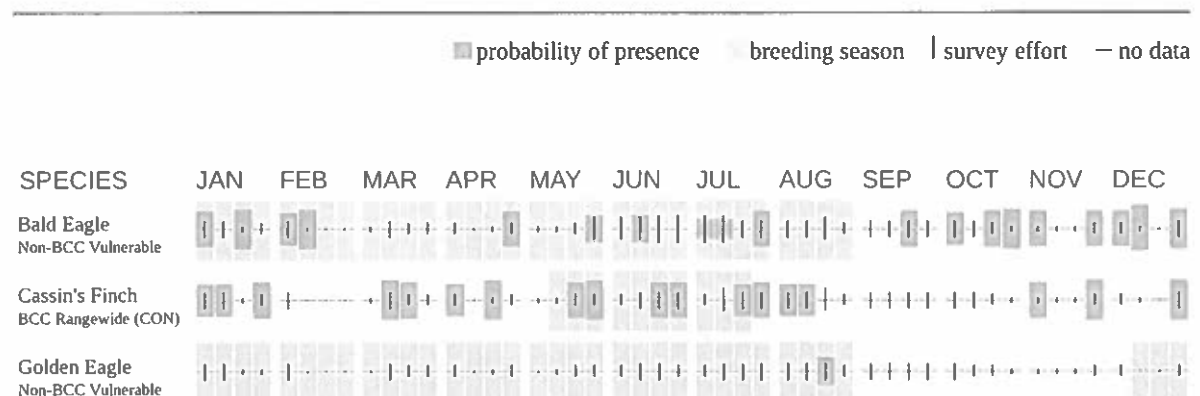
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Bald Eagle Non-BCC Vulnerable	■	■					■	■	■	■	■	■
Cassin's Finch BCC Rangewide (CON)	■	■	■	■	■	■	■	■	■	■	■	■
Golden Eagle Non-BCC Vulnerable	■	■					■	■	■	■		■

Bald Eagle
Non-BCC Vulnerable

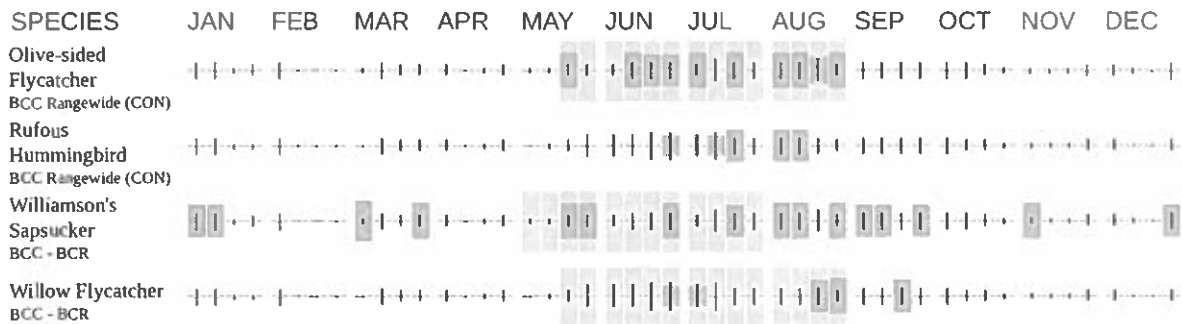
Cassin's Finch
BCC Rangewide (CON)

Golden Eagle
Non-BCC Vulnerable

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Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act

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requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can

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implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

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Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

Appendix C

Project Area Photographs



Photo 1. Facing east through the project from the paved path currently running through the project area. Vegetation through the project area consists mainly of ponderosa pine and Jeffery pine



Photo 2. Facing east, looking up the unvegetated swale towards the paved trail and a culvert running underneath it.



Photo 3. Facing west, looking down the dry wash from the paved trail, towards the existing access road. Swale has no ordinary high water mark or defined bed/bank.



Photo 4. Facing northeast from the current parking Round Hill Pines parking lot. Paved trail from US 50 to Round Hill Pines Beach Resort is visible.



Photo 5. Facing south, looking through the project area. Vegetation adjacent to the path consists of ponderosa pine and Jeffery pine.



Photo 6. Facing west, looking down the paved path, towards the existing parking lot.



Photo 7. Facing north, looking down the paved path, toward the northeastern project boundary and US 50.



Photo 8. Facing east, looking at US 50 and where the proposed access road would tie into the highway (station [STA] 107+57.13).



Photo 9. Facing south, looking along US 50 from near the northeastern project boundary (STA 35+00).



Photo 10. Facing southeast, looking along US 50 from near the southeastern project boundary (STA 11+00).

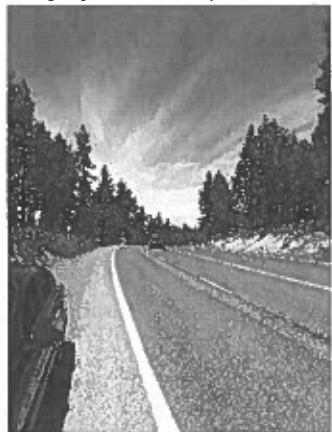


Photo 11. Facing northwest, looking along US 50 from near the southeastern project boundary (STA 11+00).

Appendix D

ESA Listed Species and State Species of Greatest Conservation Concern

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
Amphibians						
<i>Rana sierrae</i> Sierra Nevada Yellow-legged Frog	Listed Endangered	US	Wetlands, riparian, meadows	Typically inhabits large permanent water bodies or streams that are fishless and >4,000 feet. They tend to stay closely associated with high-elevation water bodies, but they are capable of longer distance travel, whether along stream courses or over land in between breeding, foraging, and overwintering habitat within lake complexes. Individuals may use different water bodies or different areas within the same water body for breeding, foraging, and overwintering. Within water bodies, adults and tadpoles prefer shallower areas and shelves with solar exposure (features rendering these areas warmer).	None. Suitable habitat is not present on the project site. No wetlands, streams, or riparian communities are present.	No
Birds						
<i>Accipiter gentilis</i> Northern goshawk	-	SB, S3, US, TRPA	Deciduous or coniferous forests	Typically inhabits late seral or old growth forests that have closed canopies (greater than 40 percent) and a relatively open understory. In central Nevada, goshawks use a wide variety of habitats for foraging; however, goshawks are primarily found nesting in aspen. Goshawks prey on a variety of small mammals and birds. Breeding usually occurs between early April and mid-June, with peak activity occurring at the end of April through May.	None. Although suitable forage habitat is present within the project area, no nests were detected during survey and the project area is over a 0.25 mile from any known nest sites. The nearest known nest site being Burke Creek, over 1 mile to the east.	No
<i>Pandion haliaetus</i> Osprey	-	TRPA	Shore, bays, wetlands, riparian, rivers, cliffs	Typically inhabits rivers, lakes, reservoirs, and seacoasts. They often cross land between bodies of water. They typically build large stick nests on living or dead trees and also use numerous man-made structures such as utility poles, wharf pilings, windmills, microwave towers, chimneys, and channel markers. Nests are usually near or above water.	None. Although suitable forage habitat is present within the project area, no nests were detected during survey and the project area is over a 0.25 mile from any known nest sites. The nearest known nest site is located approximately 5 miles north.	No
<i>Falco peregrinus anatum</i> Peregrine falcon	-	EB, S3 US	Forested habitats with cliffs/canyons, urban settings	Typically inhabits bare rock/talus/scree slopes, cliffs, shrubland/chaparral, and conifer, hardwood, and mixed woodlands.	None. Suitable nesting habitat of bare rock or cliffs are not present in the project area.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
<i>Haliaeetus leucocephalus</i> Bald eagle	-	EB, S2 (Only while breeding), TRPA, US	Coniferous forest and intermountain rivers and streams	Nests in large trees near water, such as rivers, lakes, and coast shorelines, where they prey upon fish and waterfowl. During nesting season, establish and maintain territorial boundaries.	None. Although suitable forage habitat is present within the project area, no nests were detected during field survey, and the action area is outside of known TRPA or LTBMU wintering bald eagle range, and the project area is over a 0.5 mile from any known nest sites.	No
<i>Aquila chrysaetos</i> Golden Eagle	-	TRPA	Alpine, cliffs, shrublands, open woodlands, meadows	Found generally in open country, in prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions. In Nevada, it nests predominantly on the rock ledge of a cliff or occasionally in a large tree. Pairs may have several alternate nests and may use same nest in consecutive years or shift to alternate nest used in different years.	None. Suitable habitat is not present on the project site. No appropriate nesting habitat. The nearest known nest site is approximately 10 miles to the southwest.	No
<i>Carpodacus cassinii</i> Cassin's Finch	-	S3	Coniferous and deciduous forest and woodlands, Shrubland/chaparral	Habitat consists of open coniferous forest; in migration and winter, it may also be found in deciduous woodland, second growth, scrub, brushy areas, partly open situations with scattered trees, and sometimes suburbs near mountains. Usually nests in conifer, 10 to 83 feet above ground, on the outer end of limb. It may sometimes nest in deciduous tree or in shrub. It may return to same nesting area in successive years, though this may be unusual.	Fair. Suitable habitat is present. Sightings of this species have been reported adjacent to the project site. We recommend preconstruction nesting surveys in compliance with the Migratory Bird Act if disturbance activities will take place between May 15 and July 15.	No
<i>Contopus cooperi</i> Olive-sided Flycatcher	-	S2 (Only while breeding)	Conifer, hardwood, and mixed woodland and forest	Habitat includes a variety of forest, woodland, and open situations with scattered trees, especially where tall dead snags are present; subalpine coniferous forest and mixed coniferous-deciduous forest. Birds also forage along small mountaintop ponds. Nests are placed most often in conifers, on horizontal limbs from 6 to 50 feet from the ground.	Low. Species may occasionally occur in the project area. However, the habitat in the project area is not considered preferable because of the lack of deadfall and snag along with heavy human presence. Sightings of this species have been reported adjacent to the project site. We recommend preconstruction nesting surveys in compliance with the Migratory Bird Act if disturbance activities will take place between May 20 and August 20.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservation Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
<i>Selasphorus rufus</i> Rufous Hummingbird	-	S3	Conifer, hardwood, mixed forests and woodlands, brushy hillsides; meadows abundant with nectar flowers	Breeding habitat includes coniferous forest, second growth, thickets, and brushy hillsides, with foraging extending into adjacent scrubby areas and meadows with abundant nectar flowers. Its habitat is chiefly secondary succession communities and forest openings.	Low. This species may occasionally occur in the project area. However, the habitat in the project area is not considered preferable because of the lack of flowering forbs and closed canopy. Sightings of this species have been reported adjacent to the project site. This species is not known to nest near the project area.	No
<i>Sphyrapicus thyroideus</i> Williamson's Sapsucker	-	S2	Montane and subalpine coniferous forest, primarily pine and fir with quaking aspen	Habitat includes middle to high elevation montane and subalpine coniferous forest, including spruce-fir, Douglas-fir, western larch (e.g., British Columbia), lodgepole pine, and ponderosa pine, and mixed deciduous-coniferous forest with quaking aspen. Nests are in tree cavities. Individuals usually excavate a hole 6 to 60 feet above ground, usually in dead or decaying pine, fir, larch, or aspen.	Fair. Suitable habitat is present. Sightings of this species have been reported adjacent to the project site. We recommend preconstruction nesting surveys in compliance with the migratory bird act if disturbance activities take place between May 1 and July 31.	No
<i>Empidonax traillii</i> Willow Flycatcher	-	S3	Willows, wetlands and waterbodies	Nests in dense willow habitat on edge of wet meadows, ponds, or backwaters	Low. This species may occasionally occur in the project area. However, the habitat in the project area is not considered preferable because of the lack wetlands or willow habitat. Sightings of this species have been reported adjacent to the project site.	No
<i>Strix nebulosa</i> Great gray owl	-	US	Dense coniferous forests.	Prefer pine and fir forest below 7,400 feet in elevation, with an affinity for stands near meadows. Nests are typically located in large, broken-topped snags and old raptor nests.	None. This species is not known to occur on Lake Tahoe Basin Management Unit (LTBMU). Therefore, this species is not considered to occur in the project area and the project will have no impact on this species.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
<i>Strix occidentalis occidentalis</i> California spotted owl	-	S1, US	Old-growth coniferous forests, usually dominated by ponderosa pine, douglas-fir, and/or white fir	At higher elevations (>3,200 feet), California Spotted Owls tend to occupy conifer-dominated stands. This species shows a preference for stands with complex structure and a large (>35-inch) diameter at breast height, old growth tree component.	None. Suitable habitat is not present.	No
Waterfowl	-	TRPA	Open-water, shore, riparian, wetland	Often found in open-water, riparian, wetland, shore-line, streams, lakes.	None. Suitable nesting habitat is not present on the project site and human activity is too high. No wetlands, riparian areas, or grasslands present. The action area is located outside of any waterfowl habitat identified by Tahoe Regional Planning Agency (TRPA).	No
Fish						
<i>Gila bicolor pectinifer</i> Lahontan Lake Tui Chub	-	S3, US	Freshwater	Often found in large deep lakes that may differ significantly from each other in physio-chemical conditions. In Lake Tahoe, larger individuals occupy deeper water during the day and shallow water at night, but they always stay in the upper water column in summer. They move deeper in the water column in winter. When young reach 1 to 2 centimeters, they move from beds of aquatic vegetation to deeper offshore areas.	None. Suitable habitat is not present on the project site.	No
<i>Oncorhynchus clarkia henshawi</i> Lahontan Cutthroat Trout	Listed Threatened	GF, EM, S3	Freshwater	Inhabits lakes and streams and requires cool, well-oxygenated water. It is adapted to highly mineralized waters. In streams, it uses rocky areas, riffles, deep pools, and areas under logs and overhanging banks.	None. Suitable habitat is not present on the project site.	No
Mammals						
<i>Odocoileus hemionus</i> Mule Deer	-	GM, TRPA	Sagebrush, bitterbrush, serviceberry, snowbrush, and snowberry	Occur in diverse habitat types throughout Nevada but occur in highest densities in montane shrub dominated communities. They are often associated with successional vegetation. They are often found on open south-facing slopes in winter.	None. Suitable forage habit is present, but the project site is located outside of modelled fawning habitat, as shown in the Carson River and Truckee/Loyalton Deer Herd range maps.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-	SM, S2, US	Piñon-juniper, mahogany, white fir, blackbrush, sagebrush, salt desert scrub, and agricultural lands	Found in diverse habitat types including desert, native prairies, coniferous forests, mid-elevation mixed conifer, and riparian communities. Species is dependent on cavern dwellings including mines, caves, trees, and buildings from 693 to 11,550 feet. They are loyal to natal sites and generally do not venture beyond 6 miles from a roost site.	None. While there is suitable foraging habitat in the Round Hill Pines project site, there are no structures or substrate (e.g., caves, mines, buildings) that could potentially support roosting.	No
<i>Gulo gulo luteus</i> North American Wolverine	Proposed Threatened	US	Dense mixed-conifer forests in high elevations and areas with persistent snow cover	Uses caves, hollows, logs, rock outcrops, and burrows for cover. Presence is positively associated with higher elevation snow pack, snags, talus, and remote undisturbed wilderness with minimal motorized access and low human population densities.	None. This species is not known to occur on LTBMU. Therefore, this species is not considered to occur in the project area and the project will have no impact on this species.	No
<i>Zapus princeps</i> Western Jumping Mouse	-	S2	Mountain meadows, marshes, banks of streams and ponds	Occur in mountain meadows, marshes, and along banks of streams and ponds, in dense cover of tall grasses and herbs. They nest in burrows in well-drained mound or elevated banks or on the surface among vegetation.	None. Suitable habitat is not present on the project site. No wetlands or waterbodies present.	No
<i>Thomomys monticola</i> Mountain Pocket Gopher	-	S3	Mountain meadows, rocky slopes in pine, fir, and spruce	Occur in mountain meadows and rocky slopes in pine, fir, and spruce; in rich moist soil, as well as gravelly or rocky ground. They can generally be found on open forest floor and at the edge of meadows. Mountain pocket gophers are found at high altitudes where temperatures are lower than the habitat of other pocket gopher species.	Low. Suitable coniferous forest habitat is present but mountain meadows are not present and soils are not suitable for burrowing.	No
<i>Myotis thysanodes</i> Fringed Myotis	-	PM, S2, US	Piñon-juniper, mixed woodlands and forests, deserts, shrublands, riparian, and orchards	Roosts in crevices in rocks, cliffs, buildings, underground mines, caves, bridges, and in large, decadent trees. Mostly found in dry habitats (grasslands or deserts) interspersed with mature forests (especially ponderosa pine, piñon-juniper, or oak).	Low. While there is suitable foraging habitat in the Round Hill Pines project site, structures or substrate (e.g., caves, buildings, decadent trees) that could potentially support roosting are very limited.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
<i>Martes caurina</i> Pacific Marten	-	FM, S2S3	Coniferous and mixed forest and woodland, rocky alpine	Martens occur in coniferous forest and may use rocky alpine areas. Use of habitat is related to food availability, especially in winters with deep snow. When inactive, they occupy holes in dead or live trees or stumps, abandoned squirrel nests, conifer crowns, rock piles, burrows, or snow cavities. In winter, much of a marten's activity occurs under the snow, often in coarse woody debris.	None. Suitable habitat of dense coniferous forests or rocky alpine is not present. The project area is heavily traffic by humans and highly disturbed. The nearest known den is located approximately 8 miles southwest, near Fallen Leaf Lake.	No
Plants						
<i>Boechera rigidissima</i> Galena Creek Rockcress	-	S2, US, TRPA	Aspen groves, brushy slopes	Sandy to rocky soils or outcrops derived from granitic or volcanic materials, mostly on moderate to steep northerly aspects, often in drainage ways, near meadow edges, or in other moisture accumulating microsites, generally in dry openings in Abies - Pinus - Populus tremuloides associations.	None. Suitable habitat of drainageways, other moisture accumulating microsites, and aspen stands are not present.	No
<i>Draba asterophora</i> var. <i>asterophora</i> Tahoe Draba	-	S1S2, US, TRPA	Alpine, bare rock/talus/scree, barrens	Granite rock crevices, talus, scree, or rocky decomposed granite or volcanic soils on steep slopes, mostly on northern to eastern aspects, in the subalpine conifer zone with a very sparse understory.	None. Suitable habitat of bare rock, talus, or scree is not present.	No
<i>Pinus albicaulis</i> Whitebark Pine	Candidate	S3, US	Subalpine, peaks, ridges, piñon-juniper	Found in areas with thin rocky soils mostly on peaks, ridges, and exposed northerly aspects, usually in the subalpine zone, but descending on acidic altered andesite and other specialized soils well into the piñon-juniper zone.	None. Suitable habitat of ridges, peaks, and exposed faces are not present.	No
<i>Rorippa subumbellata</i> Tahoe Yellowcress	-	S1, CE, US, TRPA	Riparian, wetland, sand/dune	Found in areas with coarse sand and sandy soils of active beaches, stream inlets, beach dunes, and backshore depressions, generally within a few feet of the local water table, endemic to the shore zone of Lake Tahoe.	None. Suitable habitat of sandy beach shores are not present on the project site.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
<i>Lewisia longipetala</i> Long-Petaled Lewisia	-	US, TRPA	Alpine, rocky	Endemic to alpine snowfield communities along the crest of the northern Sierra Nevada between elevations of 7800 and 12,470 feet. It grows in moist, rocky habitats directly below persistent snowfields, typically on north-facing and leeward slopes where snow accumulations are greatest. Plants easily become water-stressed when snowmelt ceases to reach them. Populations usually occur on gentle gravelly or bouldery slopes but are also found in the crevices of large rock slabs. Soils are derived from granitic or basaltic parent materials. (USFS 2011)	None. Suitable habitat of alpine snowfield is not present. The Projects action area is not within any known populations within the LTBMU. All known populations in the LTBMU occur within the Desolation Wilderness.	No
<i>Draba asterophora</i> var. <i>macrocarpa</i> Cup Lake Draba	-	US, TRPA	Alpine, bare rock/talus/scree	Occurs on exposed talus and boulder slopes with minimal groundcover and a sparse understory, at elevations above 8,200 feet. Soils are typically of granitic parent material but can also be volcanic in origin. (USFS 2013)	None. Suitable habitat of bare rock, talus, or scree is not present. The project's action area is not within any known populations within the LTBMU.	No
Invertebrates						
<i>Bombus occidentalis</i> Western Bumble Bee	-	US	Food plants include ceanothus, centaurea, chrysothamnus, cirsiium, geranium, grindellia, lupinus, melilotus, monardella, rubus, solidago, and trifolium.	Habitats for this species include open coniferous, deciduous, and mixed-wood forests, wet and dry meadows, montane meadows and prairie grasslands, meadows bordering riparian zones, and along roadsides in taiga adjacent to wooded areas, urban parks, gardens and agricultural areas, subalpine habitats and more isolated natural areas.	Fair. Suitable habitat is present. There is a potential to occur but with construction disturbance in the area, likelihood is low. There is also enough suitable habitat adjacent that the project will have no effect on current or future populations on this species.	No
<i>Helisoma newberryi</i> Great Basin rams-horn	-	US	Watercress	Habitat includes larger lakes and slow rivers, including larger spring sources and spring-fed creeks burrowing in soft mud just beneath the surface	None. Suitable habitat is not present. No wetlands or waterbodies.	No

Table D-1. ESA Listed Species and State Species of Greatest Conservational Need from the Action Area

Species	Federal Status	Special Status ¹	Vegetation Community	Habitat	Potential to Occur in Project Area ²	Will Be Analyzed Further
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¹ Nevada State Status, USFS LTBMU Status, State of Nevada Protected Statues, TRPA Status

CE = State of Nevada Protected Critically Endangered Plant, EB = State of Nevada Protected Endangered Bird, EM = State of Nevada Protected Nevada State Symbol, GF = State of Nevada Protected Game Fish, FM = State of Nevada Protected Fur-bearing Mammal, GM = State of Nevada Protected Game Mammal, PM = State of Nevada Protected Mammal, S1 = NNHP State Rank 1, S2 = NNHP State Rank 2, S3 = NNHP State Rank 3, SB = State of Nevada Protected Sensitive Bird, SM = State of Nevada Protected Sensitive Mammal, TRPA = TRPA special interest species, US = US Forest Service LTBMU Sensitive

² Sources:

eBird. 2019. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org>. July 2019

Nevada Natural Heritage Program (NNHP). 2019b. Species Information. <http://heritage.nv.gov/species/> June/July 2019

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Tahoe Regional Planning Agency (TRPA). 2019. *Published Open Data*. <http://data-trpa.opendata.arcgis.com/search> July 2019

U.S. Forest Service (USFS). 2011. *Long-Term Monitoring Plan: Lewisia longipetala*. USDA Forest Service, Lake Tahoe Basin Management Unit. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5337950.pdf June 2019

U.S. Forest Service (USFS). 2013. *Long-Term Monitoring Plan: Draba asterophora var. asterophora & Draba asterophora var. macrocarpa*. USDA Forest Service, Eldorado National Forest, Humboldt-Toiyabe National Forest & Lake Tahoe Basin Management Unit. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5444261.pdf June 2019

At Risk and Data Sensitive Taxa Recorded Near the Round Hill Pines Project Area in Douglas County

Compiled by the Nevada Natural Heritage Program for Jacobs

14 June 2019

Scientific name	Common name	Usfws	Blm	Usfs	State	Srank	Grank	UTME	UTMN	Loc	Uncert	Last Obs
										Uncert	Dist (m)	
Plants												
<i>Rorippa subumbellata</i>	Tahoe yellowcress		S	R5S	CE	S1	G1	24XXXX	432XXXX	Estimated	20	2004-09-09
<i>Rorippa subumbellata</i>	Tahoe yellowcress		S	R5S	CE	S1	G1	24XXXX	431XXXX	Estimated	161	1994-SUM
<i>Rorippa subumbellata</i>	Tahoe yellowcress		S	R5S	CE	S1	G1	24XXXX	431XXXX	Estimated	161	2005-09
Mammals												
<i>Myotis thysanodes</i>	fringed myotis		S		PM	S2	G4	244031	4319380	Estimated	1609	1954-05-23
<i>Thomomys monticola</i>	mountain pocket gopher		S			S3	G5	244571	4321153	Estimated	1609	1946-Pre
<i>Zapus princeps</i>	western jumping mouse		S			S2	G5	245678	4321834	Estimated	1609	1946-Pre

Bureau of Land Management (Blm) Species Classification:

S Sensitive Species- Species designated Sensitive by State Director of Nevada BLM

United States Forest Service (Usfs) Species Classification:

R5S Region 5 (Inyo National Forest or Lake Tahoe Basin Management Unit) Sensitive or Watch Status

Nevada State Protected (State) Species Classification:

PM Protected Mammal (NAC 503.030.1)

Flora:

CE Critically endangered - species whose survival requires assistance because of overexploitation, disease or other factors, or because their habitat is threatened with destruction, drastic modification or severe curtailment (NRS 527.260-.300)

Locational Uncertainty:

Based on the uncertainty associated with the underlying information on the location of the observation.

Estimated uncertainty varies in more than one dimension; true location of the observation can be visualized as floating within an area for which boundaries cannot be specifically delimited

Nevada Natural Heritage Program Global (Grank) and State (Srank) Ranks for Threats and/or Vulnerability:

- G Global rank indicator, based on worldwide distribution at the species level
T Global trinomial rank indicator, based on worldwide distribution at the infraspecific level
S State rank indicator, based on distribution within Nevada at the lowest taxonomic level
- 1 Critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors
 - 2 Imperiled due to rarity or other demonstrable factors
 - 3 Vulnerable to decline because rare and local throughout its range, or with very restricted range
 - 4 Long-term concern, though now apparently secure; usually rare in parts of its range, especially at its periphery
 - 5 Demonstrably secure, widespread, and abundant
- A Accidental within Nevada
B Breeding status within Nevada (excludes resident taxa)
H Historical; could be rediscovered
N Non-breeding status within Nevada (excludes resident taxa)
Q Taxonomic status uncertain
U Unrankable
Z Enduring occurrences cannot be defined (usually given to migrant or accidental birds)
? Assigned rank uncertain

Final
Traffic Noise Study
for the
NV FLAP US 50(1) Round Hill Pines Access Project
Douglas County, Nevada

Prepared for:
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue St. 380 N
Lakewood, CO 80228



February 2021

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Acronyms and Abbreviations

CNEL	community noise equivalent level
dB	decibel
dBA	A-weighted decibels
FHWA	Federal Highway Administration
Lden	Day Evening Night Sound Level
NAC	Noise Abatement Criteria
NDOT	Nevada Department of Transportation
STA	station
TNM	Traffic Noise Model
TRPA	Tahoe Regional Planning Agency
US	U.S. Route

Executive Summary

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division, in cooperation with the United State Department of Agriculture Forest Service Lake Tahoe Basin Management Unit, the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50). The Project begins south of the existing entrance into the resort and extends north along US 50. The Project is located in Douglas County near Zephyr Cove, Nevada.

The purpose of this Traffic Noise Study technical report is to evaluate potential noise impacts at noise-sensitive receptor locations near the Round Hill Pines Access Project.

- Existing peak hour traffic (2016) would be up to 59 dBA.
- Under the No-Build Alternative (2036), noise levels do not approach or exceed the FHWA or NDOT NAC at any of the modeled receivers. In addition, the calculated noise levels show that future no-build increases would be up to approximately 1 A-weighted decibel (dBA) above existing noise levels.
- Under the Build Alternative, design-year (2036) noise level predictions would not approach or exceed the NDOT NAC or TRPA noise levels at any of the modeled receivers nor would they experience substantial increases. The calculated noise levels show that future build increases would be up to 3 dBA above existing noise levels. Therefore, no noise impacts would result from the proposed Project.

1.0 Introduction

The Round Hill Pines Access Project is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50). This Project involves relocating the Round Hill Pines access road intersection with US 50, constructing the Round Hill Pines access road on new alignment, widening US 50 to accommodate a center median turn and acceleration lane in Douglas County, Nevada. The relocated Round Hill Pines access road would connect to existing parking areas for the Round Hill Pines Resort. Additional improvements include roadway drainage improvements, permanent water quality structures, signing, and striping.

The northern edge of the study area for this project extends from 140 feet north of Sierra Sunset Lane to 500 feet south of the Round Hill Pines access road. The Round Hill Pines Resort Beach and Marina, to the west of US 50, are also included in the study area (**Figure 1**). Land use within the study area consists of residential development and recreational use.

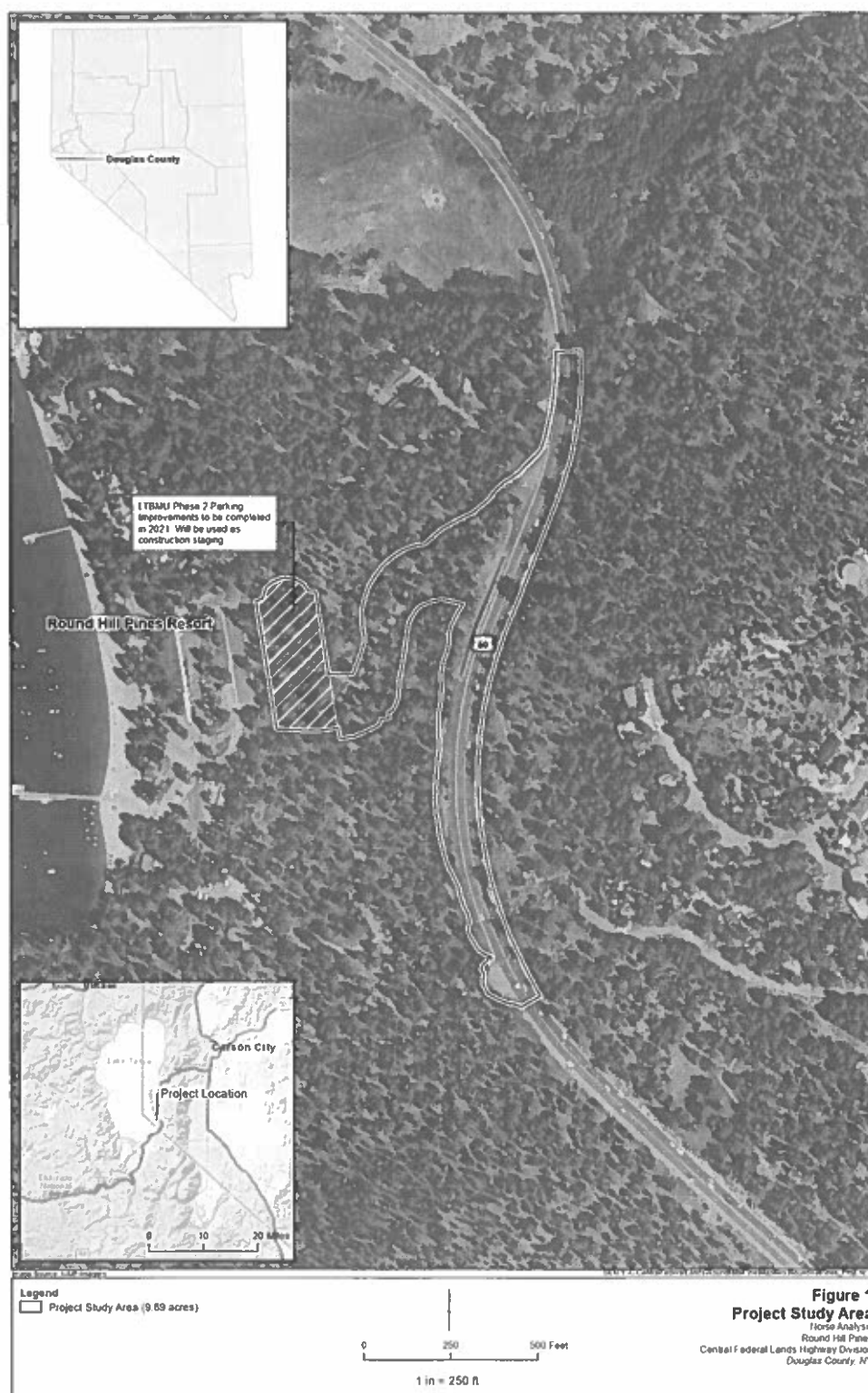


Figure 1. Project Study Area

2.0 Build Alternative

Under the Build Alternative, the Round Hill Pines Resort access road and US 50 intersection would be relocated approximately 0.2 mile further to the north from the existing location. US 50 would be widened at the relocated intersection to accommodate a new median left-turn bay and eastbound US 50 acceleration lane. The US 50 cross section at the relocated intersection would consist of two 12-foot eastbound lanes, two 12-foot westbound lanes, a 12-foot-wide median left-turn bay, and an eastbound US 50 acceleration lane. Shoulder widths along US 50 would remain the same as existing, consisting of 4-foot-wide shoulders along US 50 westbound and 6-foot-wide shoulders along US 50 eastbound. The US 50 alignment would not change as part of the proposed project. The remaining areas of US 50 adjacent to the relocated intersection would receive a pavement mill and overlay, lane striping, pavement markings, and a safety edge, in addition to the widening.

An existing concrete slab retaining wall is located along the western US 50 slope embankment facing into the Round Hill Pines Resort. The existing retaining wall would remain in place, and the slope paving would be removed. Guardrail would be used at this location along with 1:2 slopes to minimize the construction footprint. A curb section with minimal ditching would be added along the western side of US 50, and no ditches would be constructed along the eastern side of US 50. Roadway slopes would be constructed using boulders and vegetation to enhance visual aesthetics and blend into the natural setting.

Existing 18- and 36-inch culverts within the project area would be replaced as well as armored with riprap where feasible. The clear zone, which is the area available for safe use by errant vehicles, would be improved through removal of obstructions, including clearing vegetation adjacent to the roadway as feasible. All traffic control signs would be reviewed and replaced, if needed, to meet current standards.

The Round Hill Pines access road would be constructed on new alignment. The access road would be reconstructed to accommodate two 12-foot lanes with 2-foot-wide shoulders. The new access road would have barnroof slopes consisting of 1:4 within the clear zone (12 feet from edge of traveled way) with 1:2 slopes to reduce construction impacts.

3.0 Noise Standards and Fundamentals

Noise is defined as unwanted sound. Sound is defined as a form or energy transmitted by vibrations in the air which are received by the ear through sense of hearing. The terms noise and sound are used synonymously.

Sound is measured in sound pressure levels. The most common unit of measurement is a decibel (dB). For the purposes of environmental studies, the A-weighted scale on a common sound level instrument is used because it closely approximates the range of frequencies an average human ear can detect. The A-weighted noise levels are defined as dBA. Generally, changes in noise levels less than 3 A-weighted decibels (dBA) are barely perceived by the human ear, whereas a 10-dBA change is normally perceived as a doubling of noise levels.

Noise may be continuous or intermittent and of high frequency or low frequency. Traffic noise is typically measured over a 1-hour period, which is defined as the level equivalent (Leq(h)).

The CNEL averages dB levels over a 24-hour period, with noise late at night and early in the morning being weighted greater because humans and wildlife are more sensitive to noise during these periods. The CNEL adds a penalty of 5 dBA to evening hours between 1900 to 2200 and a penalty of 10 dBA added to the nighttime hours of 2200 to 0700.

4.0 Federal, State, and Local Regulations

The Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) define noise levels for land activity categories. The Nevada Department of Transportation (NDOT) has adopted these NAC and defines noise levels that if approached (1 dBA less than the FHWA NAC) or exceeded, require noise abatement consideration (see **Table 1** for various land use categories). FHWA guidelines also state that noise abatement should be considered when the noise levels substantially exceed the existing noise levels (Code of Federal Regulation Title 23, Section 772.5(g)). This criterion is defined by NDOT as increases in the L_{eq} of 12.0 dBA or more above existing noise levels. Douglas County has adopted both FHWA and NDOT guidelines for assessing traffic noise impacts.

Table 1. NAC, Hourly A-Weighted Sound Level Decibels (dBA) ¹

Activity Category	Activity Criteria ²		Evaluation Location	Description of Activity Category
	Leq(h)	L10(h)		
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ³	67	70	Exterior	Residential.
C ³	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E ³	72	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	---	---	---	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	---	---	---	Undeveloped lands that are not permitted.

¹ Either Leq(h) or L10(h) (but not both) may be used on a project.

² The Leq(h) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

³ Includes undeveloped lands permitted for this activity category.

The Tahoe Regional Planning Agency (TRPA) has identified noise as an environmental threshold and has established carrying capacity standards for noise. The TRPA Goals and Policies addresses single event noise standard and uses a community noise equivalent level (CNEL) to measure whether noise levels exceed established levels. This Project is in the TRPA Plan Area identified as US 50 near Round Hill with a threshold of 65 dB (TRPA 2020).

5.0 Methodology

The FHWA traffic noise model (TNM) version 2.5 (FHWA 2004) is an approved analytical method developed for highway-traffic noise prediction. The model is based upon reference energy emission levels for automobiles, medium trucks (two axles), and heavy trucks (three or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receptor, terrain features, atmospheric conditions, and acoustical characteristics of the site. TNM was developed to predict hourly Leq and CNEL values for free-flowing and interrupted-flow traffic conditions, and is generally considered to be accurate, within ± 3 decibels (dBA). The model enables the user to account for the effects of graded roadways, terrain variations, and attenuation over/through rows of buildings and dense vegetation. The model uses traffic noise-emission curves, which FHWA recommends, to accurately calculate noise levels that highway traffic generates. The model for the Existing condition used 2016 traffic data, while 2036 traffic data were used for the No-Build and the Build models. Traffic information was provided by 30% plans from April 2019 for the Leq levels. Traffic used for the CNEL levels was obtained from the Traffic Signal Warrant Study NVFLAP US 50(1) Round Hill Pines Access (FHWA, 2019).

6.0 Traffic Data

Traffic was provided as a part of the plan set (Table 2). The posted speed of 45 miles per hour (mph) was used for existing and no-build models. The proposed speed on US 50 will be 50 mph, and 25 mph was used for the access road, as shown in the plan set, and in the build model.

Table 2. Existing and Future Peak Hour Traffic Data

Roadway	Existing Peak Hour Traffic (2016)			Future Peak Hour Traffic (2036)		
	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
US 50, northbound	945	28	28	1211	35	35
US 50, southbound	945	28	28	1211	35	35
Access road, eastbound*	59	1	1	87	1	1
Access road, westbound*	59	1	1	87	1	1

*Access Road to Round Hill Pines is only open seasonally, May to September, exact dates are weather dependent

7.0 Noise Analysis

7.1 Noise-sensitive Receptors

Noise-sensitive receptors within the Project study area include recreational use (Round Hills Pines Beach and Marina trail) and residential development (at Sierra Sunset Lane and Round Hill Village, east of US 50). These noise-sensitive areas are described in Table 3 and depicted on Figure 2. Noise-sensitive

receptors are defined as those areas where frequent outdoor human use would occur that may be affected by future transportation conditions.

Table 3. Modeled Noise Details

Receiver No.	Land Use	X	Y	Z
R1	Single-family Residence	2,236,438.00	14,670,952.00	6,273.00
R2	Single-family Residence	2,236,239.50	14,670,826.00	6,267.00
R3	Marina Trail	2,236,411.00	14,670,586.00	6,277.52
R4	Marina Trail	2,236,111.25	14,669,624.00	6,296.00
R5	Marina Trail	2,236,166.50	14,669,241.00	6,334.00
R6	Single-family Residence	2,236,846.75	14,669,976.00	6,415.00
R7	Single-family Residence	2,236,888.25	14,669,770.00	6,416.00
R8	Single-family Residence	2,236,793.25	14,669,514.00	6,404.00

7.2 Noise Measurements and Model Validation

On July 22, 2019, noise measurements were taken at four locations within the Project study area to determine ambient noise levels. **Figure 2** depicts the locations of the field measurements. Weather conditions were clear with winds ranging from 0 to 5 mph and a temperature of approximately 80 degrees. Meters were calibrated and placed at 5 feet above ground surface, the average height of the human ear. Short-term noise readings were collected for 15 minutes for each event as required by NDOT. Traffic counts, by vehicle type, were collected simultaneously with the noise measurements. Operating speeds and existing geometry were also collected and input into the FHWA-approved TNM 2.5 for validation (**Table 4**).

The difference between the field recordings and the model-predicted noise levels for ground receivers (M1 – M4) was less than 3 dBA, which is considered validated. The TNM is considered validated when the difference in the field recorded noise levels and the TNM-predicted noise levels are 3 dBA or less because the human ear can detect change over 3 dBA.

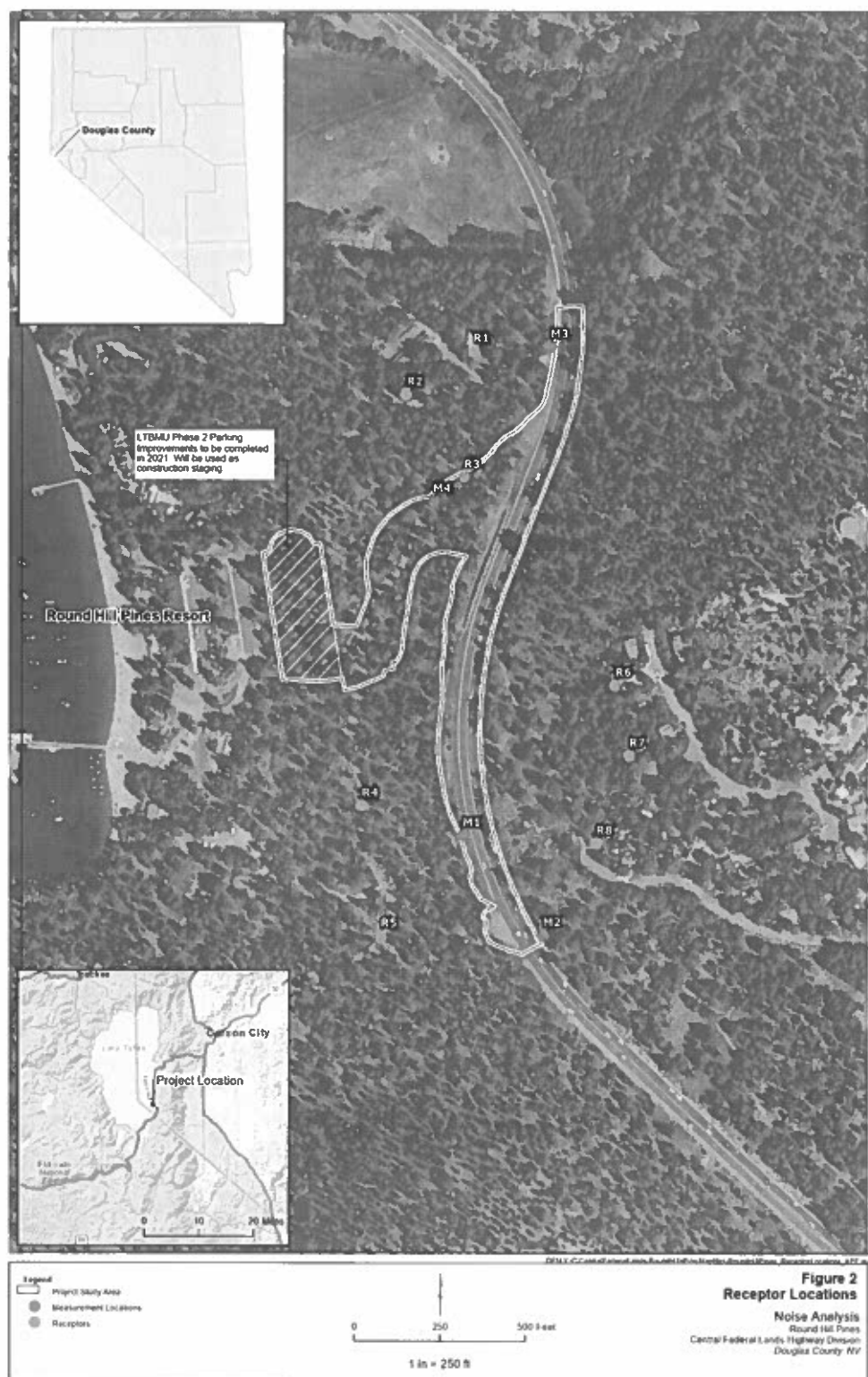


Figure 2. Receptor Locations**Table 4. Field Recorded and TNM-Predicted Noise Levels**

Meter #	Location	Field-recorded Noise Levels $L_{(eq)}(h)$	TNM-predicted Noise Levels $L_{(eq)}(h)$	Difference $L_{(eq)}(h)$
M1	25 feet from paved edge of US 50, west of US 50	64.1	66.6	2.5
M2	20 feet from paved edge of US 50, east of US 50	68.5	70.6	2.1
M3	10 feet from paved edge of US 50, north of entrance at Sierra Sunset Lane	74.2	71.4	-2.8
M4	225 feet from paved edge of US 50, on trail at Round Hill Pines Beach and Marina	55.8	54.7	-1.1

7.3 Existing and Future Modeled Noise Levels

Noise models were developed for the Round Hill Pines Beach Resort and surrounding area.

The western side of the road slopes away from the road and the eastern side is elevated above the roadway. **Table 5** shows the existing and future noise levels at the receivers.

Table 5. Modeled Noise Levels

Receiver No.	No. of Receiver by Activity	NAC (dBA)	Leq				CNEL				Noise Impact
			Existing 2016 Leq (dBA)	No-Build Alternative Leq 2036 (dBA)	Build Alternative Leq 2036 (dBA)	Build increase over Existing	Existing 2016 CNEL (dBA)	No-Build CNEL 2036 (dBA)	Build CNEL 2036 (dBA)	Build increase over Existing	
R1	1	66/B	58	59	61	3	62	63	63	1	No
R2	1	66/B	54	55	57	3	57	58	58	1	No
R3	1	66/B	59	60	61	2	62	63	63	1	No
R4	1	66/B	54	55	55	1	57	58	58	1	No
R5	1	66/B	53	54	55	2	57	58	58	1	No
R6	3	66/B	56	57	59	3	59	60	62	3	No
R7	2	66/B	55	56	58	3	58	59	60	2	No
R8	2	66/B	58	59	61	3	61	62	63	2	No

As shown in **Table 5**, there are no impacts at any of the noise-sensitive receivers, which are set back between 175 and 475 feet from the road. The largest increase between the Existing and Build alternatives is less than 3 dBA and would therefore not be a noticeable increase to the human ear. Additionally, the noise levels are below the CNEL limit of 65 dB for this plan area and, therefore, this Project is consistent with the TRPA community noise level equivalent standard.

8.0 Construction-related Noise

Construction would generate noise from diesel-powered earth-moving equipment, such as dump trucks and bulldozers, back-up alarms on certain equipment, and compressors. Construction noises at off-site receptor locations would depend on the loudest piece of equipment operating at the moment. According to the FHWA *Construction Noise Handbook* (2006), noise levels from diesel-powered equipment range from 80 to 95 dBA at a distance of 50 feet. Impact equipment, such as pile drivers, can generate louder noise levels. Construction activities would be temporary and would mostly occur during normal daytime hours when occasional loud noises are more tolerable. None of the receptors are expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal daytime activities is not expected. Coordination will be conducted with local agencies to secure necessary construction permits which may include variances for any nighttime construction work and/or exceedance of any maximum thresholds specified in local ordinances.

9.0 Conclusions

The following are a summary of results:

- Existing peak hour traffic (2016) noise levels do not approach or exceed the FHWA and NDOT NAC at any of the eight modeled receivers.
- Under the No-Build Alternative, noise levels are below the NAC with future increases up to approximately 1 dBA above existing noise levels.
- Under the Build Alternative, design-year (2036) noise levels are predicted to remain below the NDOT and TRPA noise levels and not experience substantial increases, and thus not result in any impacts.
- Noise abatement would not be necessary, as impacts would not result from the proposed project.
- There is no increases in existing Community Noise Equivalency Levels (CNEL) beyond the 65 dBA CNEL permitted in the applicable Plan Area Statement, Community Plan or Master Plan.
- There will be no exposure of people to severe noise levels nor would the Project exceed the single event of noise level limit set forth in the TRPA Noise Environmental Threshold.
- There is no residential or tourist accommodation uses in areas where the existing CNEL would exceed the 65 dBA set forth in the TRPA Environmental Threshold.
- The Project would not generate an incompatible noise level in close proximity to existing residential or tourist accommodation uses.

- No exposure of existing structures to levels of ground vibration that could result in structural damage would be expected to occur.

10.0 References

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Visual Impact Assessment
for the
NV FLAP US 50(1) Round Hill Pines Access Project
Douglas County, Nevada

Prepared for:
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Acronyms and Abbreviations

FHWA	Federal Highway Administration
KOP	Key Observation Point
Project	Round Hill Pines Access Project
SIO	scenic integrity objective
SMS	Scenery Management System
STA	station
TRPA	Tahoe Regional Planning Agency
US	United States Route
USFS	United States Forest Service
VIA	Visual Impact Assessment

1.0 Introduction/Purpose of the Study

The Round Hill Pines Access Project (Project) is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from United States Route 50 (US 50). The proposed project begins on US 50, approximately 500 feet southeast of the original entrance road (Station [STA] 11+00) and continues approximately 0.35 mile north along US 50 to approximately 130 feet north of the intersection of Sierra Sunset Lane and US 50 (STA 35+00), in Douglas County, Nevada (Figure 1, Project Location; all figures are located in a figure section at the end of the report).

This Project involves relocating the Round Hill Pines access road intersection with US 50, constructing the Round Hill Pines access road on new alignment, and widening US 50 to accommodate a center median turn and acceleration lanes. The relocated Round Hill Pines access road will connect to existing parking areas for the Round Hill Pines Resort. Additional improvements include roadway drainage improvements, permanent water quality structures, signing, and striping.

The purpose of this Visual Impact Assessment (VIA) is to analyze the potential visual impacts associated with the proposed project and the consistency of the project-related visual changes with the visual objectives that applicable plans have established for the Project area.

2.0 Project Description (Build Alternative)

Figure 2 is a drawing that identifies the footprint of the Build Alternative's major features. As this figure indicates, as part of the Build Alternative, the Round Hill Pines Resort access road and US 50 intersection would be relocated approximately 0.2 mile farther to the north from the existing location. US 50 would be widened at the relocated intersection to accommodate a new median left-turn bay and eastbound US 50 acceleration lane. The US 50 cross section at the relocated intersection would consist of two 12-foot eastbound lanes, two 12-foot westbound lanes, a 12-foot-wide median left-turn bay, and an eastbound US 50 acceleration lane. Shoulder widths along US 50 would remain the same as existing, consisting of 4-foot-wide shoulders along US 50 westbound and 6-foot-wide shoulders along US 50 eastbound. The US 50 alignment would not change as part of the proposed project. The remaining areas of US 50 adjacent to the relocated intersection would receive a pavement mill and overlay, lane striping, pavement markings, and a safety edge, in addition to the widening.

An existing concrete slab retaining wall is located along the western US 50 slope embankment facing into the Round Hill Pines Resort. The existing retaining wall would remain in place, and the slope paving would be removed. Guardrail would be used at this location along with 1:2 slopes to minimize the construction footprint. A curb section with minimal ditching would be added along the western side of US 50, and no ditches would be constructed along the eastern side of US 50. Roadway slopes would be constructed using boulders and vegetation to enhance visual aesthetics and blend into the natural setting.

Existing 18- and 36-inch culverts within the Project area would be replaced as well as armored with riprap where feasible. The clear zone, which is the area available for safe use by errant vehicles, would be improved through removal of obstructions, including clearing vegetation adjacent to the roadway as feasible. All traffic control signs would be reviewed and replaced, if needed, to meet current standards.

The Round Hill Pines access road would be constructed on new alignment. The access road would be reconstructed to accommodate two 12-foot lanes with 2-foot-wide shoulders. The new access road would have 1:4 barnroof slopes within the clear zone (12 feet from edge of traveled way) with 1:2 slopes to reduce construction impacts.

3.0 Project Location and Setting

3.1 Location and Visual Context

The proposed project is located on the eastern side of Lake Tahoe in Douglas County, Nevada. The 0.35-mile section of US 50 that will be widened by the Project is a small segment of the Lake Tahoe East Shore Scenic Byway, a 28-mile long National Scenic Byway that travels along the eastern side of Lake Tahoe from Crystal Bay on the north to Stateline on the south (Figure 1). From Stateline to the intersection with US 50 at Spooner Junction, the byway follows Nevada State Route 28. From Spooner Junction to Stateline, the byway follows US 50. Although the Lake Tahoe East Shore Scenic Byway travels through a series of areas that are developed, much of its route is located in natural-appearing landscapes, and the road provides a sequence of dramatic views toward Lake Tahoe and surrounding mountains, earning it the reputation as “The most beautiful drive in America.”

The segment of the highway on which the Project will be constructed is part of a short section of roadway that extends through an undeveloped, natural-appearing forested area that lies between the node of commercial and residential development at Zephyr Cove on the north and the shopping center at the intersection of US 50 and Elk Point Road on the south. The 0.35-mile segment of US 50 that will be affected by the Project lies 0.2 mile to the east of the lake and at elevations that range from approximately 60 feet to 100 feet higher than that of the lake’s surface. In this area, the landscape is heavily forested with pine trees (Figures 4a and 5a), and as a consequence, the views are restricted to the forested corridor along the highway, and there are few views toward the lake or the surrounding mountain ranges.

3.2 Scenic Threshold Ratings in the Project Area

The lands on the western side of US 50 are lands administered by the USFS. The USFS has leased the lands between the segment of the highway affected by the Project and the lake to a private concessionaire to operate as the Round Hill Pines Resort (see Figure 3 for the resort’s boundaries). This resort facility includes a sandy beach that offers views of the lake and the surrounding mountains as well as parking, a restaurant, restrooms, shelters, and a range of recreational facilities and recreational equipment rentals.

In the Lake Tahoe *Land Management Plan* (USDA Forest Service 2016), all lands under USFS jurisdiction have been designated with a scenic integrity objective (SIO) that establishes the level of scenic quality that the plan seeks to achieve for each specific area. In the US 50 corridor in the Project area and on the Round Hill Pines Resort site, the plan establishes an SIO of “High,” a designation given to landscapes that appear unaltered:

HIGH scenic integrity refers to landscapes where the valued landscape character “appears” intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character and at such a scale that they are not evident. (USDA Forest Service 1995, pp. 2-4)

Because the lands on the eastern side of the segment of US 50 that will be affected by the Project are privately owned, they are not subject to the provisions of the USFS *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016). Instead, they fall under the regulatory jurisdiction of Douglas County. These private lands on the eastern side of the highway corridor as well as the USFS managed lands on the western side all are subject to the regulations of the Tahoe Regional Planning Agency (TRPA).

The overarching objectives of TRPA are to protect the water quality and opacity of Lake Tahoe and Project area views from the lake to the surrounding landscape and views from the areas around the lake toward the lake and the landscape beyond. To establish a baseline for evaluating the potential effects of

proposed projects on views from the lake and on views from surrounding roadways toward the lake, in 1982, the TRPA published scenic resource inventories that focused on views of the shoreline from the lake, views toward the lake from surrounding roadways, as well as other visual points of interest in the Lake Tahoe area (TRPA 1982a; 1982b). In evaluating the views from the lake toward the shore (the Shoreline Units) (TRPA 1982b), the inventory used a landscape scoring system that assigned numerical scores ranging from 1 (low visual quality) to 5 (high visual quality) to three variables (human-made features, background views, and landscape variety) that were combined to create an overall visual quality score. For the roadway units (TRPA 1982a), scores from 1 to 5 were assigned to six variables (human-made features, roadway distraction, road structure, lake views, landscape views, and variety) (TRPA 2016, Appendix G-1).

The Shoreline Study (TRPA 1982b) identified the Project area as being in Shoreline Unit 29, Zephyr Cove, which includes Round Hill Pines. The Shoreline Study characterized the view from the lake toward the Round Hill Pines Resort (Shoreline Unit 29.6) as “View is of natural appearing shoreline with sandy beach. Some clutter from signs and low walls is visible, but no large structures except for one. Slope is densely forested.” Shoreline Unit 29 received a threshold composite score of 9 in 1982, and this level has been maintained in assessments undertaken between 1982 and 2015 (TRPA 2016, Appendix G-1). The Shoreline Study (TRPA 1982b) characterizes the scenic quality of this unit as moderate and rates its level of scenic quality as 2.

The Roadway Study (TRPA 1982a) identified the Project area as being in Roadway Unit 30, Zephyr Cove-Lincoln Park. The Roadway Study indicates that just north of the shopping center at Elks Point Road, “...the road returns to a natural condition, with pine forests on both sides for about 1.0 km (0.6 mile). Only minor development exists in this area. The view from this road segment (30.1) is listed in the “Views of natural landscape from roadway” category and this view is characterized as “Area of natural pine forest with minor development on both sides of road.” In 2001, the roadway segment that includes the Project area was placed in Roadway Unit 30D (Round Hill) that includes a 1-mile stretch of US 50 that extends from Elks Point Road in the south to the Pinewild condo complex at the southern edge of Zephyr Cove to the north. In 1991, when this sub-unit was created, it received a threshold composite score of 18. In 2006, this score was increased to 19 to reflect visual improvements to some of the developed areas within the unit, and this rating was maintained in subsequent years. (TRPA 2016, Appendix G-1). The 1982 Shoreline Study (TRPA 1982b) characterized the scenic quality of the larger Zephyr Cove-Lincoln Park unit of which the Round Hill Unit 30D is a sub-unit as moderate and rated its level of scenic quality as 2.

4.0 Methodology

4.1 Analysis Methods

This analysis of the proposed project’s visual impacts was prepared by applying the procedures common to the VIA methods developed by the Federal Highway Administration (FHWA) and USFS. The objective of the analysis was to identify the visual changes that the proposed project would bring about and the consistency of those changes with the High SIO established for the Project area by the *Land Management Plan, Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) and with the threshold composite ratings that the TRPA has established for the Shoreline and Scenic Travel Routes within which the Project is located.

The procedure used to determine the proposed project’s visual impacts follows the six steps outlined in the FHWA publication *Visual Impact Assessment for Highway Projects* (FHWA 1981):

- Define the Project setting in terms of visual character and quality, and identify the viewshed of the Project.

- Identify the viewers and their levels of sensitivity.
- Identify key views for visual assessment.
- Analyze existing visual resources and responses from viewers looking *from* the Project (while traveling through it) and viewers looking *at* the Project from nearby areas.
- Depict the visual appearance of the Project (using text descriptions, graphics and, where appropriate, visual simulations).
- Assess the visual impacts of Project.
- Propose methods to mitigate adverse visual impacts.

For a roadway project, it is appropriate to assess changes to the landscape as seen from the road to determine how travelers on the road might be affected by the proposed visual changes. There is also a need to assess views of the proposed project from areas off the roadway to determine how people near the proposed project would be potentially affected.

The visual quality of National Forest lands is managed using the USFS Scenery Management System (SMS), which establishes SIOs that describe the degree to which the natural landscape can acceptably be modified, based on a combination of variety class and sensitivity level. The SMS defines five SMS classes that establish how a landscape is to appear based upon varying degrees of naturalness:

- Very High (unaltered)
- High (appears unaltered)
- Moderate (slightly altered)
- Low (moderately altered)
- Very Low (heavily altered)

In the *Land Management Plan, Lake Tahoe Basin Management Unit*, the area in which the Project is located has been designated with an SIO of High (retention) (USDA Forest Service 2016).

To determine the consistency of the proposed project with the retention Visual Quality Objective the *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) has established for the Project area, the guidance provided by the USFS *National Forest Landscape Management*, Volume 2, Chapter 1—The Visual Management System (USFS 1977a), and *Landscape Aesthetics: A Handbook for Scenery Management* (USFS 1995) was used. The guidance for the retention SIO in these documents specifies that:

Under retention, activities may only repeat form, line, color and texture which are frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc. should not be evident. Immediate reduction of form, line, color, and texture to meet retention should be accomplished either during operation or immediately after. It may be done by such means as seeing, vegetative clearings and cut-or-fill slopes, hand planting of large stock, painting structures, etc. (USFS 1977a, p. 30)

4.2 Application of the Methods

The area analyzed encompasses the 0.35-mile segment of roadway that begins on US 50, approximately 500 feet southeast of the original entrance road and continues approximately 0.35-mile north along US 50 to approximately 130 feet north of the intersection of Sierra Sunset Lane and US 50. Because of the thick forest cover in the Project area, the Project viewshed—that is, the area from which the proposed changes to the road would be potentially visible to visitors off the road—is very limited. The analysis area extends out approximately 0.1 mile to the eastern side of the roadway, but encompass the potential views of the

Project from Lake Tahoe, which are of concern to the TRPA. It includes the Round Hill Pines Resort site and extends approximately 400 feet out into the lake. To structure the analysis, the Project area has been divided into two landscape units: the area along 0.35-mile road segment that will be altered, and the area within the Round Hill Pines Resort and the adjacent area of the lake (Figure 3).

The segment of US 50 in which the Project is located is heavily traveled, carrying an average of 20,000 vehicles per day. Although many of the travelers using this road segment are local residents, who drive through the area on the way to and from their homes, and commuters, who are driving to jobs located in South Lake Tahoe, Stateline, Zephyr Cove, and other locations around the lake where there are concentrations of employment, a large percentage of the travelers in this area are people who are driving the road to enjoy its scenic qualities and whose destinations are the Lake Tahoe Basin's scenic landscapes and recreational facilities. It can be assumed the recreational travelers using the road value the aesthetic qualities of the road and the scenery alongside it and would be highly sensitive to any major changes to them.

Fieldwork was undertaken in August 2019 to document existing visual conditions in the two landscape units. Field observations and photo documentation of the existing views were guided by review of the proposed project plans, which provided an understanding of the areas where visible changes would potentially occur. Representative photos of sensitive views where the proposed project would result in modifications to the existing landscape were taken from a range of viewpoints within each of the two landscape units. These photographs were taken with a digital single-lens-reflex camera with the lens set to take photographs equivalent to those taken with a 35-millimeter (mm) camera with a 48-mm focal length.

After the field visit, the photos were reviewed, and in consultation with the Central Federal Lands project manager and TRPA planning staff and environmental specialist on September 4, 2019, three photos were selected for use in this visual analysis. The viewpoints from which the selected photos were taken are referred to as key observation points (KOPs). The locations of these KOPs are indicated on Figure 3.

Visual simulations were prepared for the photos taken from the three KOPs to depict the views from KOPs as they would appear with the proposed project's changes. Existing topographic and site data were used as the basis for developing an initial digital model, and Project engineers provided site plans and digital data for the proposed roadway and other built features. These were used to create three-dimensional digital models used in the visual simulations. For each KOP, the view location was digitized from topographic maps and scaled aerial photographs, using 5 feet as the assumed viewer eye level. Images representing the existing and simulated-with-project views from each of these KOPs are presented in Figures 4 through 6.

Based on review of the existing condition photos, an assessment was made of the existing visual character and scenic integrity of the views, applying the principles documented in the following USFS and TRPA references:

- *Agriculture Handbook Number 434, National Forest Landscape Management*, Volume 1 (USFS 1973)
- *Agriculture Handbook Number 462, National Forest Landscape Management*, Volume 2, Chapter 1 The Visual Management System (USFS 1977a)
- *Agriculture Handbook Number 483, National Forest Landscape Management*, Volume 2, Chapter 4 Roads (USFS 1977b)
- *Agriculture Handbook Number 701, Landscape Aesthetics: A Handbook for Scenery Management* (USFS 1995)
- *Scenic Resource Inventory Tahoe Environmental Study Shoreline Unit Inventory* (TRPA 1982b)

- *Scenic Resource Inventory Tahoe Environmental Study Roadway Unit Inventory* (TRPA 1982a)
- *2015 Threshold Evaluation*, Appendix G-1 (TRPA 2016)

Section 5.0, Existing Conditions and Project Impacts, documents the Project area's existing visual conditions and assesses the proposed project's potential visual effects. The changes visible in KOPs 1 through 3 were evaluated in terms the National Forest Landscape Management System criteria to determine whether the proposed action creates visual conditions that are consistent with the USFS retention SIO and with the TRPA scenic standards for Roadway Unit 30D (Round Hill) and Shoreline Unit 29 (Zephyr Cove). The construction period impacts are assessed in Section 6.0, and the impacts of the No Build Alternative are assessed in Section 7.0. Based on the proposed project, the visual impact (documented in Sections 5.0 through 7.0) measures to attenuate the Project's visual impacts were identified, and these measures are documented in Section 8.0, Conclusions and Mitigation.

5.0 Existing Visual Conditions and Project Impacts

5.1 US 50 Corridor

5.1.1 Existing Conditions

This landscape unit encompasses the corridor along the 0.35-mile segment of US 50 where the project-related modifications will take place. In this area, the highway has four lanes. On the eastern side of the road, the land slopes upward, and there are cuts in the slope to accommodate the roadway. These cuts are covered with a rip rap that consists of large, irregularly shaped rock fragments. Above the rip rap, the slopes are covered with a pine forest with a shrub understory. Although there is a residential subdivision higher up on this slope, with homes as close as 300 to 400 feet from the roadway, these homes are not visible because of their upslope locations and the screening provided by the trees. On the western side of the road, in the northern portion of the Project area, much of the western edge of this segment is located on a fill slope with sides that are bermed and, in some areas, supported by a retaining wall. Generally, the bermed area and retaining walls are not visible to travelers on the highway. The western edge of the roadway is bordered by closely growing pine trees, which in the flatter areas grow very close to the roadway. Much of the western edge of the roadway is bordered by a galvanized steel guard rail, which because it is unpainted, has a light grayish color that attracts attention because of its contrast with the colors of the forest behind it. Because the views toward the lake, which is downslope from this area, are screened by the thick pine forest between the highway and the lake, there are no views toward the lake from this segment of US 50. In addition, because of the surrounding topography and the tree cover, this roadway segment provides few views of distant mountains. The only views of distant mountains are those seen by the southbound lanes near the Project area's southern end, where the cleared corridor created by the roadway permits forward views of the tops of the mountains located behind South Lake Tahoe. From some areas of the northbound lanes in this segment, there are views toward residences that are exposed to view on a nearby hillside to the north. The only landmark along the road in the Project area are the rustic, curved stone walls that frame the existing entrance to the Round Hill Pines Resort.

5.1.1.1 KOP 1

KOP 1 (Figure 4a) is a view from a point in the northern portion of the Project area looking south toward the proposed location of the new access road into the Round Hill Pines Site. Because this photo was taken from the outside edge of the roadway, it picks up more of the view of the berm on which the western edge of the roadway is located than would be the case with views from the travel lanes that would be seen by those traveling south on the highway. The eastern edge of this view is framed by the heavy tree cover on the forested slope above the roadway's eastern edge, and the rip rap-covered road cuts at the slope's base. On the roadway's western edge, the berm on which the western portion of the highway is located is

visible, covered with paved surfaces over which native shrubs are growing. The thick forest of generally small and closely spaced pine trees extends to the base of the roadway berm. An unpainted dull galvanized steel guard rail is located along the roadway's edge, and where its face is visible, it contrasts with its forest backdrop.

5.1.1.2 KOP 2

KOP 2 (Figure 5a) is a view from a point in the middle section of the Project area looking north toward the proposed location of the new access road into the Round Hill Pines Site. This view, taken at the roadway's eastern edge, provides both close-up and more distant views of the rip rap at the base of the cut slopes along the eastern side of the roadway, as well as close and more distant views of the pine trees that cover the slopes above them. The steel guard rail frames the entire western edge of the roadway in this area, and the light color of its unpainted galvanized steel finish contrasts with the greens and browns of the thick stand of pines seen behind it. In addition to the roadway and its appurtenances, the only human-made features seen in this view are the residences visible on the hillside located to the north directly above the centerline of the roadway corridor.

5.1.2 Project-Related Visual Changes and Consistency with USFS and TRPA Visual Objectives

Figure 4b is a simulation of the view looking south from US 50 toward the new entrance to the Round Hill Pines Resort as it would appear with the Project in place, and Figure 5b is a simulation of the view looking north up US 50 toward the resort's new entrance. Review of both simulations makes it clear that the Project will have no visual effects on the highway's existing eastern edge. The rip rap-covered cut slopes and the forest-covered slopes above them will be untouched by the Project and thus will not be changed in any way. The highway modifications will be accomplished by extending the highway to the west. The result will be a highway that generally follows the existing highway alignment, but which will be somewhat wider than it is now, making it appear less constricted. With its wider curves and dedicated turning lanes, it is also likely to appear safer to the motorists using it. The extension of the highway's berm into the forested area on the roadway's western side will require the removal of some of the trees that are closest to the existing highway in that area, but the solid line of trees along the highway's western edge will remain. The removal of the trees closest to the highway will open up the view along the highway corridor to some degree, making it less confined than it is at present. The one exception to this generalization about maintenance of the tree line along the highway's western edge will occur at the point where the entrance of the new Round Hill Pines Resort access road will be located. As can be seen in the simulations presented as Figures 4b and 5b, a partial disruption of the tree line will appear in this area. This disruption will not appear as a sharp gap in the tree line because the narrowness of the access road will limit the number of trees that need to be removed and the fact that the access road joins US 50 at a right angle will limit the visual effect of the break in the tree line that this road will create. A steel guard rail will be constructed along the western edge of the widened highway, but unlike the existing unpainted galvanized guard rail along the highway's western edge, the planned guard rail will have a brown surface treatment that will help to reduce its visual contrast with the highway's natural setting. As Figure 4b indicates, places along the western edge of the highway where there are disturbed soils or exposed soils related to filling, revegetation with native grasses and shrubs will take place. With the Project, this segment of US 50 will continue to be an area where there are no views of the lake. The Project will create no changes in the views of the mountains to the south seen at the southern end of the Project highway segment and will have no effect on the views toward the houses on the hill above the roadway's northern end seen in KOP 2.

The visual changes that the Project will bring about will be generally consistent with the retention SIO that the *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) has assigned to this area. Overall, the Project will not substantially change the visual character of the views from the roadway corridor, which will remain a roadway through a forested area in which buildings and

other human intrusions are limited. The roadway improvements will be consistent with the form, line, color, and texture of the elements that now predominate in this landscape area. At the point where the new access road enters the Round Hill Pines Resort site, there will be a break in the line of trees that currently border the western side of the highway, which will create a minor change to the character of the roadway in this specific area, but the character of the roadway in the rest of the Project area will remain relatively unchanged. In one way, the Project will bring about an improvement of the view from the road by replacing the existing galvanized steel guard rails along the western edge of the road with new guard rails that have a brown surface treatment, which will reduce their visual contrast and will be more consistent with the surrounding forest landscape.

As explained in Section 3.2, TRPA's 2015 *Threshold Evaluation* report identified Roadway Unit 30D Round Hill (the 1.0-mile-long roadway unit that includes the highway segment where the Project is located) as having a threshold composite score of 19. This score was based on evaluation using five variables, each of which was rated on a scale ranging from 1 (low) to 5 (high). The Project visual changes described in the text and visible in the simulations are not likely to change the individual scores on which the overall score of 19 was based. The variables as defined in Appendix G-1 of the 2015 *Threshold Evaluation* (indicated in italics), the 2015 scores, and the potential effects of any project-related visual changes on them are detailed as follows:

- ***Human-made Features – 3.5***

This variable applies to buildings, signs, piers, utility lines, and other features made by humans, including prominent scars on the landscape. Whether these features are desirable or undesirable depends on such factors as location, design, color, size, and material.

The score of 3.5 reflects conditions that are slightly better than 3, which is defined as a situation in which human-made features cause only temporary distractions. As review of the simulations indicates, the Project will not add new, distracting human-made features, and the case can be made that the replacement of the existing galvanized steel guard rail with one with a brown surface treatment further reduces the presence of distracting human-made elements along the roadway corridor.

- ***Physical Distractions to Driving Along Roadway – 3***

These items can create distractions that decrease pleasure of the drive. These distractions include hazards created by uncontrolled access and poor access road takeoff or entrance points that create traffic backup.

The score of 3 is defined as a situation in which physical distractions cause some interference with enjoyment of the drive. The Project design will not add features that will constitute physical distractions to drivers. The case can be made that by eliminating the very awkward and dangerous existing entrance to the Round Hill Pines Resort site and replacing it with a new entrance with a left-hand turn pocket for northbound drivers, the Project will eliminate what is perhaps the major source of driver distractions in this segment of the highway and create vastly improved sightlines for travelers approaching the entrance road, leading to an increase in this score.

- ***Characteristics of Roadway – 3***

The roadway can add to or detract from the traveler's pleasure. Good alignment takes advantage of natural terrain features, avoids road scars, adds variety and vistas to the drive, and avoids ugly areas. Physical alignment is also a part of this evaluation. A road may have horizontal or vertical curves that are difficult to drive on or that detract from the view. Straight roads lack variety and can evoke a negative response from the viewer.

The score of 3 is defined as a situation in which the road detracts from the natural scene. The roadway improvements proposed do not include any features that would detract from the driver's experience, and in fact, by smoothing out the roadway's curves and improving sightlines, would improve the driver's pleasure in driving this road segment.

- ***Views of Lake – 3***

One main reason why people visit this region is to see the Lake. Some roadways offer outstanding view of the Lake, but some sections offer no such views. Many view areas are on access roads into the region. They should be evaluated, in addition to the present perimeter highways, so that this factor can be used as a consideration in future road upgrading and location. This factor can also be used to determine areas along the roadway where timber may be cut to improve vistas.

The score of 3 that this variable received is applied to areas where the travel zone offers a glimpse of the lake. Although there may be segments of this 1-mile-long travel zone in which there are views of the lake, in the 0.35-mile-long road segment where the Project will occur, there are currently no views of the lake and no views will be created by the Project. Because the Project will not affect other areas of this travel zone where views toward the lake may exist, the Project will have no effect on the score assigned to this variable.

- ***Landscape Views – 3***

Extensive scenic views reward the visitor, but closed spaces prevent them from seeing the landscape. Looking over a cliff into space or looking up at massive mountains can be very rewarding even to the person who is already acquainted with the scene.

For this variable, a score of 3 indicates travel zone in which there are only limited opportunities to view natural landscape expanses. As the description of the existing landscape in the corridor along the segment of US 50 in which the Project is located indicates, because of the topography and heavy forest cover in the Project corridor, there are currently relatively few expansive views of scenic landscape features. With the Project, this situation will remain the same, and the Project would not bring about a change in this score.

- ***Variety – 3***

Variety along a travel route is created by changes in the total landscape. These changes can be created by topography, vegetation, water or human-made facilities. When these changes harmonize with the natural environment, they are very desirable. Lack of variety over an extended drive can bore a traveler.

A score of 3 for this variable indicates it is a travel zone that has some variety. As the description of the existing landscape in the corridor along the segment of US 50 in which the Project is located indicates, the area along the highway is mostly heavily forested, which limits the level of landscape variety. With the Project, this situation will remain the same, and the Project would not bring about a change in this score.

As this assessment of the variables used to create the threshold composite score for the roadway unit in which the Project is located indicates, the Project will not lead to reductions in any of the scores assigned to them, and in some cases, could raise them. As a consequence, the Project will not reduce the composite score for the roadway unit, and thus will not reduce the "moderate" rating that was assigned to the Zephyr Cove-Lincoln Park unit (of which the Unit 30D Round Hill is a sub-unit) in the *Scenic Resource Inventory Tahoe Environmental Study Roadway Unit Inventory* (TRPA 1982a).

5.2 Round Hill Pines Resort and Lake Tahoe

5.2.1 Existing Conditions

This landscape unit encompasses the portion of the Round Hill Pines Resort to the west of the US 50 landscape unit and extends 300 feet out into Lake Tahoe. The Round Hill Pines Resort is located on a large parcel of USFS land located between US 50 and the lake that is leased to a private operator to run as a day use facility that provides access to a long sandy beach on the lake's shoreline. The site slopes from US 50 down to the lake and is covered with a thick forest of pine trees. The resort's developed facilities, which are concentrated in the area along the beach, include a large building that houses a restaurant, shop, and function rooms; a restroom building; tent pavilions; and both unpaved and paved parking areas. Because for the most part, the facilities are located under the trees and have a rustic design, they integrate reasonably well with the site's landscape. Because the US 50 corridor where the Project-related modifications will take place is located at the upper edge of the site, away from the beach and developed areas of the site where the visitors to the resort are concentrated, and because views toward the roadway corridor from the area of visitor concentration are screened by the intervening pine forest, the sensitivity of the site's users to the Project's modifications will be low.

5.2.1.1 KOP 3

KOP 3 (Figure 6a) is a view from a point located 300 feet out on the pier at the Round Hill Pines Resort. The objective of this view is to capture a representative view from the near shore area of the lake that can be used to make the assessment of the Project's impacts on views from the lake that is required by TRPA. The major components of this view include the lake in the foreground; the beach along the shoreline with scattered parties of beach goers, a shed, and an area with a concentration of umbrellas; several tent pavilions and a rest room building in the zone at the beach's edge next to the forest; the beach lodge with restaurant and meeting rooms located under the trees at the right side of the view; and the pine forest behind the beach, which screens the views toward the east. The pine forest, which is the dominant element in this view appears to be relatively intact, and the developed facilities are subordinate to it, creating a view that is pleasant and in which the elements fit together in an orderly way.

5.2.2 Project-related Visual Changes and Consistency with USFS and TRPA Visual Objectives

Figure 6b is a simulation of the view from the pier looking eastward as it would appear with the Project in place. Because of the area where the project-related changes would take place is located upslope and 1,000 feet and more in the distance, and because of the screening provided by the thick forest cover, the roadway improvements will not be visible from this vantage point. The only change to this view, which will be subtle, will be that because of the limited tree clearing that will be required to permit development of the access road, a few of the treetops now seen on the far horizon in the area above the rest room building will disappear. This change is reflected in the simulation. Overall, the effect of this change on the visual character and quality of this view will be negligible. As a consequence, the Project will be entirely consistent with the retention SIO that the USFS *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) has assigned to this area.

As explained in Section 3.2, the 2015 *Threshold Evaluation* report (TRPA 2016) identified the Project area as being in Shoreline Unit 29, Zephyr Cove, which includes Round Hill Pines. The Shoreline Study (TRPA 1982b) characterized the view from the lake toward the Round Hill Pines Resort (29.6) as "View is of natural appearing shoreline with sandy beach. Some clutter from signs and low walls is visible, but no large structures except for one. Slope is densely forested." This unit received a threshold composite score of 9 in 1982, and this level has been maintained in assessments undertaken between 1982 and 2015 (TRPA 2016, Appendix G-1). This score was based on evaluation using three variables (human-made features, background views, and variety), each of which was rated on a scale ranging from 1 (low)

to 5 (high). Because the Project visual changes on the view seen in the simulation and described in the text are negligible, they will have no effect on the individual scores on which the overall score of 9 was based. Because the threshold composite score for the shoreline unit in which the Project is located will not change, the Project will not reduce the “moderate” rating that the *Scenic Resource Inventory Tahoe Environmental Study Shoreline Unit Inventory* (TRPA 1982b) assigned to Shoreline Unit 29 Zephyr Cove.

6.0 Construction Period Impacts

Construction of the proposed project would be completed in a single construction season. During that time, construction equipment would be visible along and adjacent to the roadway. To permit continued use of the US 50 while construction is taking place, concrete barriers would be installed to separate the work areas from the travel lanes kept open for traffic. The generation of dust would be limited through implementing standard best management practices for dust suppression. It is anticipated that much of the construction activity would take place during daylight hours. Should nighttime construction operations be required, measures would be taken to control the impacts of the night lighting through minimization of the lighting, lighting only areas necessary for construction operations and safety, directing light specifically to those areas where it is required, and use of light fixtures that are hooded to prevent spill into surrounding areas and the night sky. These construction activities may create moderate levels of visual contrast with the existing visual setting, but that would not necessarily be inconsistent with the Project area’s retention SIO, because they would be short-term in duration and would be localized to the specific areas being worked on at a given time.

7.0 No Build Alternative

Under the No Build Alternative, none of the features proposed for the Project under the Build Alternative would be constructed. As a consequence, there would be no visual changes in either the US 50 or Round Hill Pines and Lake Tahoe landscape units, and thus no incompatibility with the visual objectives that the *Land Management Plan Lake Tahoe Basin Management Unit* (USDA Forest Service 2016) and the TRPA’s scenic resource inventories (1982a; 1982b) have established for these areas.

8.0 Conclusions and Mitigations

As the foregoing analysis has established, the visual changes brought about by the proposed project would be consistent with the visual objectives for the Project that the USFS and TRPA have established for the Project area.

The Project’s design will include measures intended to integrate it into its landscape setting and reduce potential visual impacts. These include leaving the slope on the eastern edge of the US 50 roadway undisturbed; generally following the existing roadway alignment to reduce impacts, but widening the road to permit safe turns and smoothing out curves to permit improved sightlines; replanting disturbed areas; and treating the surface of the guard rail that will run along the western side of the roadway with a brown color that will reduce its visual contrast with its setting. An additional measure that should be considered to bring about a further reduction in the Project’s visual impacts include dense hand planting of mid-height (up to 2.5 feet) native shrubs in any open areas in close vicinity of where the new Round Hill Pines access road meets US 50. In addition to completely covering areas of exposed soil, because of their medium height, these shrubs will partially screen views toward the surface of the access road seen by travelers on US 50, reducing the effect on the visual integrity of the roadside. As a further measure to attenuate the Project’s visual impacts, once the engineering plans for the expanded berm on

the road's western side have been completed, a careful analysis should be done of the locations of trees in and adjacent to the area that the expanded berm will cover so that a precise clearing plan can be developed. This plan should minimize the numbers of trees that have to be removed and should design the cuts in a way that the new forest edge that will be created will have a feathered, natural appearance, as opposed to an appearance that is abrupt and artificial looking.

9.0 References

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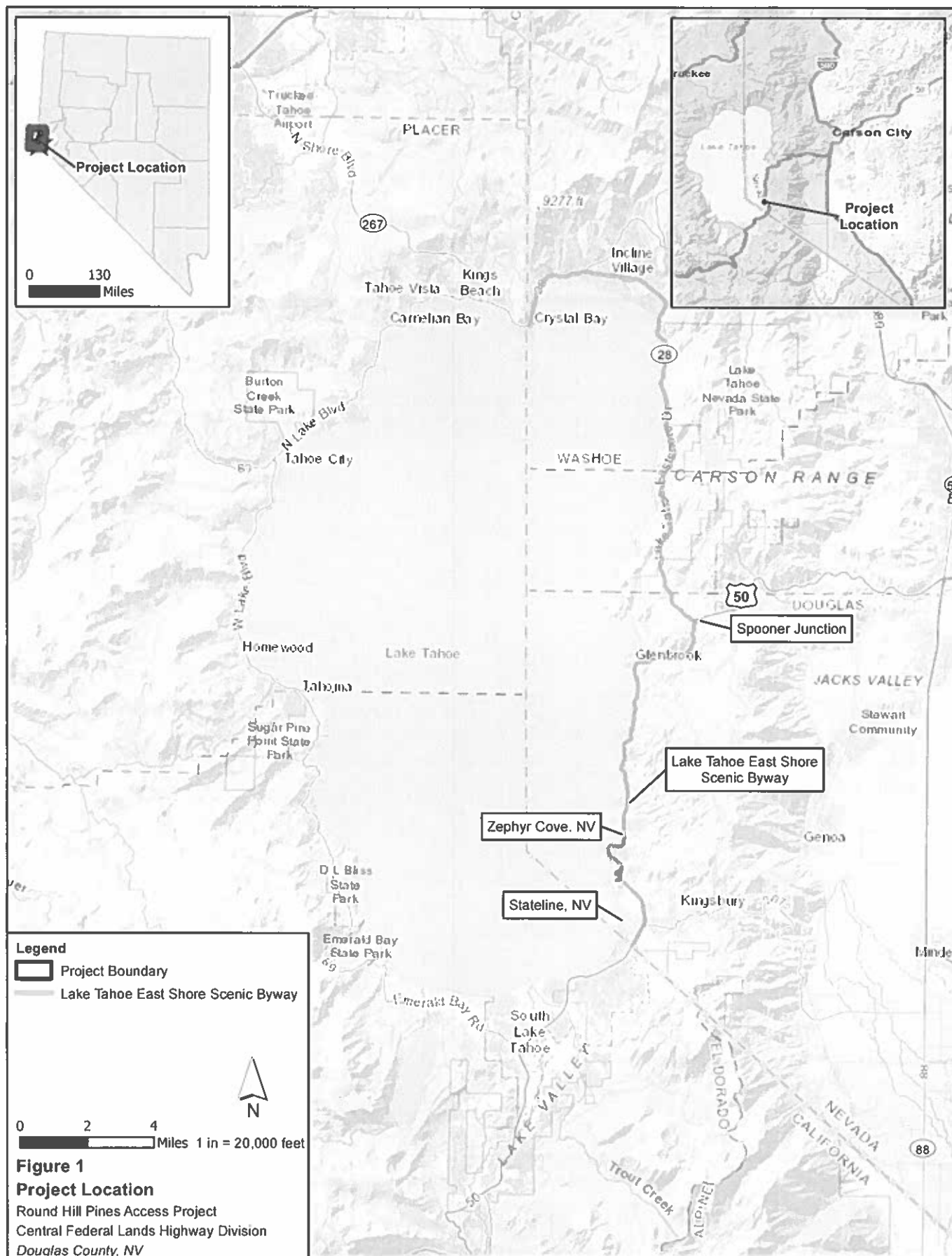
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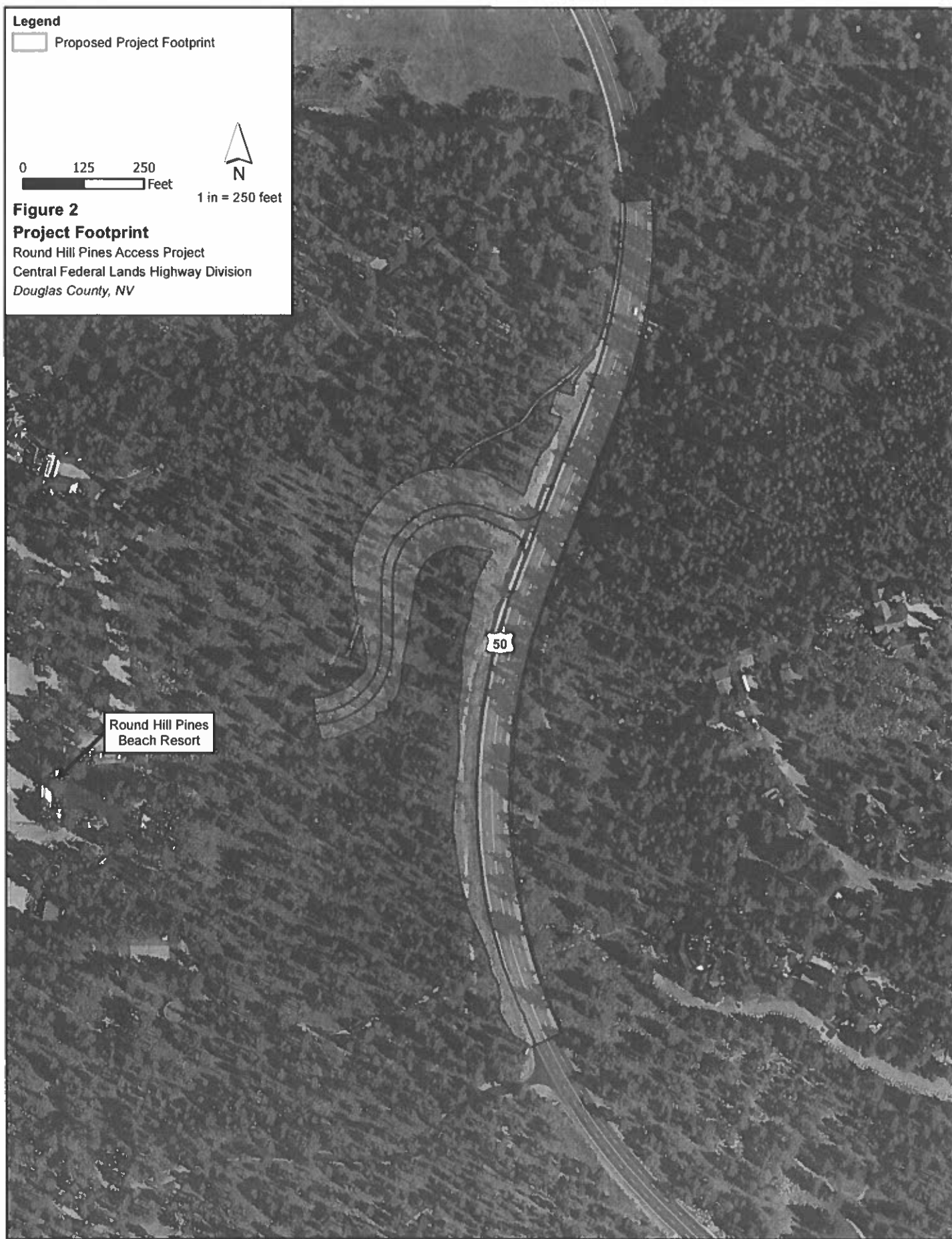
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Figures







Y:\CentralFederalLands\RoundHillsPine\Mapfiles\RoundHillPines_KOPs.mxd



a. Existing view from US 50 looking south in the direction of the area where the new entrance to the Round Hill Pines Resort is proposed.



b. Simulated view from US 50 north of the proposed new entrance to the Round Hill Pines Resort that depicts the view with the new entrance in place.

Figure 4
KOP 1
Round Hill Pines Access Project
Central Federal Lands
Douglas County, NV

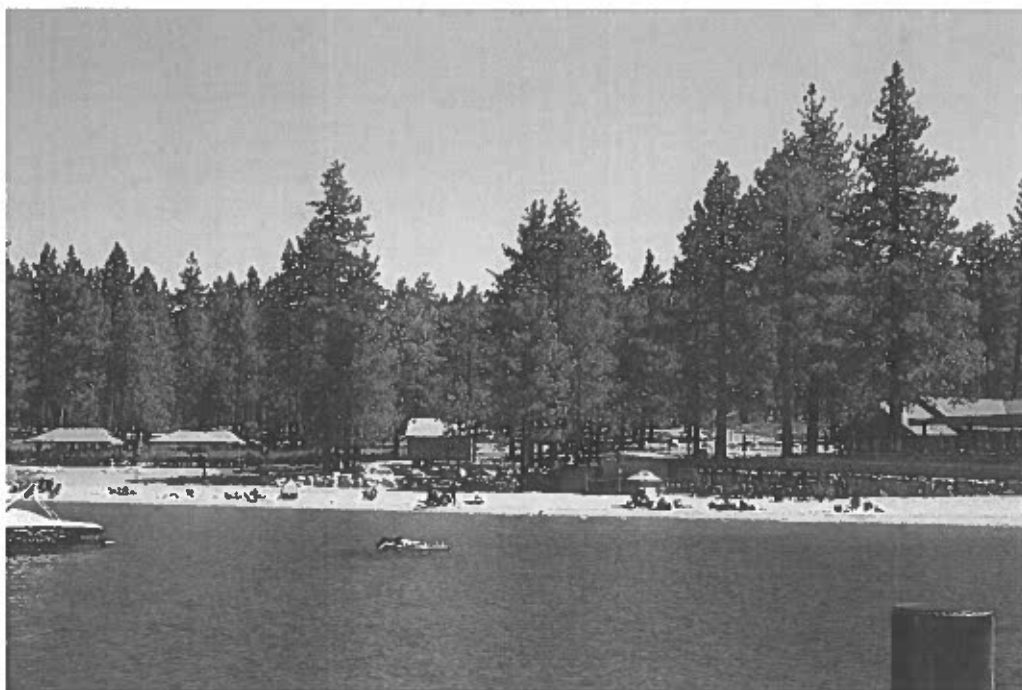


a. Existing view from US 50 looking north in the direction of the area where the new entrance to the Round Hill Pines Resort is proposed.



b. Simulated view from US 50 south of the proposed new entrance to the Round Hill Pines Resort that depicts the view with the new entrance in place.

Figure 5
KOP 2
Round Hill Pines Access Project
Central Federal Lands
Douglas County, NV



a. Existing view from a point on the Round Hill Pines Resort pier 300 feet out from the shoreline looking east in the direction of the area on the forested slope where the access project improvements will be made.



b. Simulated view from the pier in the direction of the area on the forested slope where the access project improvements will be made. Because of the thick forest cover that completely screens the view toward the project area, none of the roadway improvements will be visible. The only change, which will not be readily detectable to the casual viewer, is that because of the tree removal required by the road expansion, the tops of several of the trees seen in the distance will no longer be visible in the view.

Figure 6
KOP 3
Round Hill Pines Access Project
Central Federal Lands
Douglas County, NV

APPENDIX B

Public Involvement Materials

April 2019 Public Information Meeting

- Newsletter
- Public Notice
- Comments

September 2019 Public Information Meeting

- Newsletter
- Public Notice
- Comments

Round Hill Pines Access Project

U.S. Highway 50

Zephyr Cove, Nevada



U.S. Department of Transportation
Federal Highway
Administration



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Project Overview

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency, and the Nevada Department of Transportation, is seeking comments on the Proposed Action for the Round Hill Pines Access Project.

The Proposed Action is to improve safety for visitors entering and existing the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.



Purpose of Meeting

In recognition of the need to improve safety at this location, FHWA-CFLHD is conducting an Environmental Assessment (EA) study as part of the National Environmental Policy Act (NEPA) process. This study will investigate existing transportation conditions, and identify and evaluate potential environmental impacts of a preferred alternative.

The Round Hill Pines Access Project is in the initial scoping phase of the NEPA analysis. We are asking for your comments on the Proposed Action. This scoping notice is intended to provide those interested in or affected by this project with an opportunity to make their concerns known.

Ways to Be Involved

Your input is critical to guiding the development of this project so that it reflects the needs, concerns, and desires of your community.

Attend the public meeting and talk with project team members about your questions or concerns.

If you are unable to appear at the public meeting, please send your written or electronic comments to a member of the project team listed below.

Public Meeting #1

Tuesday, April 23, 2019
5:00—8:00 p.m.
Presentation: 6:00 p.m.
USFS Lake Tahoe Basin Management
Unit Office
35 College Drive
South Lake Tahoe, CA 96150

Contact Information

Thomas Parker
Project Manager
Federal Highway Administration
U.S. Department of Transportation
(720) 963-3688
E-mail: thomas.parker@dot.gov

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US Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue
Lakewood, CO 80228

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FEDERAL LANDS HIGHWAY DIVISION
DENVER, CO 80228
Attn: Thomas Parker

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Bailee Liston

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Date: 04/05/2019 State of Nevada, Carson City

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**PUBLIC INFORMATIONAL MEETING FOR
ROUNDHILL PINES ACCESS PROJECT**

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service, Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency, and the Nevada Department of Transportation, is seeking comments on the Proposed Action for the Round Hill Pines Access Project. The Proposed Action is to improve safety for visitors entering and existing the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

In recognition of the need to improve safety at this location, FHWA-CFLHD is conducting an Environmental Assessment (EA) study as part of the National Environmental Policy Act (NEPA) and Tahoe Regional Planning Compact processes. This study will investigate existing transportation conditions, and identify and evaluate potential environmental impacts of a preferred alternative. The Round Hill Pines Access Project is in the initial scoping phase of the NEPA analysis. We are asking for your comments on the Proposed Action. This scoping notice is intended to provide those interested in or affected by this project with an opportunity to make their concerns known. Work on this project is currently in the environmental compliance and preliminary engineering phase.

The first meetings will be held at the following locations and times:

**Tuesday, April 23, 2019
5:00 to 8:00 p.m.
Presentation: 6:00 p.m.
United States Forest Service,
Lake Tahoe Basin Management Unit Office
35 College Drive
South Lake Tahoe, CA 96150**

Information will be shared at the meeting on the project and environmental process. Public input will be gathered regarding the project purpose and need and goals and issues that are important to the community. The FHWA and its partners encourages community members to attend to provide input on this important project.

For more information on the Round Hill Pines Access Project, please visit the project's website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>. Those unable to attend the meetings can provide input by contacting the project manager, Mr. Thomas Parker, via email to thomas.w.parker@dot.gov or by telephone at (720) 963-3688.

Pub: April 5, 2019

Ad#0000399214

From: Edgar, Lindsay (FHWA)
Bcc: "ldurkee@carson.org"; "shelly@tristatecommercial.com"; "Heather@carrarany.com"; "klewis@douglasnv.us"; "kara@fnttahoe.com"; Hoefer, Anjanette -FS; "malexander02@fs.fed.us"; "elizabeth.blann@hardrockcasinolaketahoe.com"; "HUCKBODY@aol.com"; "carol@LTVA.org"; "jesse@keaptahoeblue.org"; "Leila@keaptahoeblue.org"; "DCartwright@dot.nv.gov"; "WStory@dot.nv.gov"; "SSulahria@dot.nv.gov"; "lawrence@dcnr.nv.gov"; "ddapolito@parks.nv.gov"; "javattahoe@gmail.com"; "nevadaclearinghouse@lands.nv.gov"; "sally.gardner@pacunion.com"; "tc@tcarlson.biz"; "Andrew@rhgid.org"; "ppage@rhgid.org"; "info@rhgid.com"; "sltharold@sbcglobal.net"; "annehavidson@gmail.com"; "tonja.elkins@outlook.com"; "epalazzo@cityofslt.us"; "lee.f.moisio@gmail.com"; "sharon@staor.org"; "theochoas3@charter.net"; "aberry@tahoefund.org"; "smerrill@benchmark.com"; "tc@thecashmancompanies.com"; "tahoedrums@cloud.com"; "nicolemisfeldt@outlook.com"; chasty.tahoetransportation.org; "dhughes@tahoetransportation.org"; "sfriedman@trpa.org"; nhaven.trpa.org; "sudeep@unr.edu"; "dustin.f.finkelson@uscg.mil"; "iflower@fs.fed.us"; "mbeall@vailresorts.com"; "jgalassini@washoecounty.us"; Parker, Thomas W (FHWA); "ledgar311@gmail.com"
Subject: US Highway 50 Round Hill Pines Access Project - Public Information Meeting Notice
Date: Wednesday, March 27, 2019 11:17:00 AM
Attachments: US 50 Round Hill Pines Access Project - Public Meeting.pdf

PUBLIC INFORMATIONAL MEETING FOR ROUND HILL PINES ACCESS PROJECT

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service, Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency, and the Nevada Department of Transportation, is seeking comments on the Proposed Action for the Round Hill Pines Access Project. The Proposed Action is to improve safety for visitors entering and existing the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

In recognition of the need to improve safety at this location, FHWA-CFLHD is conducting an Environmental Assessment (EA) study as part of the National Environmental Policy Act (NEPA) and Tahoe Regional Planning Compact processes. This study will investigate existing transportation conditions, and identify and evaluate potential environmental impacts of a preferred alternative. The Round Hill Pines Access Project is in the initial scoping phase of the NEPA analysis. We are asking for your comments on the Proposed Action. This scoping notice is intended to provide those interested in or affected by this project with an opportunity to make their concerns known. Work on this project is currently in the environmental compliance and preliminary engineering phase.

The first meetings will be held at the following locations and times:

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Information will be shared at the meeting on the project and environmental process. Public input will be gathered regarding the project purpose and need and goals and issues that are important to the community. The FHWA and its partners encourages community members to attend to provide input on this important project.

For more information on the Round Hill Pines Access Project, please see the attached flyer or visit the project's website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>. Those unable to attend the meetings can provide input by contacting the project manager, Mr. Thomas Parker, via email to thomas.w.parker@dot.gov or by telephone at (720) 963-3688.

Thanks,

Lindsay Edgar
Environmental Protection Specialist
Federal Highway Administration
Central Federal Lands
12300 W. Dakota Avenue, Suite 280
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720-963-3684
lindsay.edgar@dot.gov



**Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM**

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Email Address: Kmegalea@gmail.com

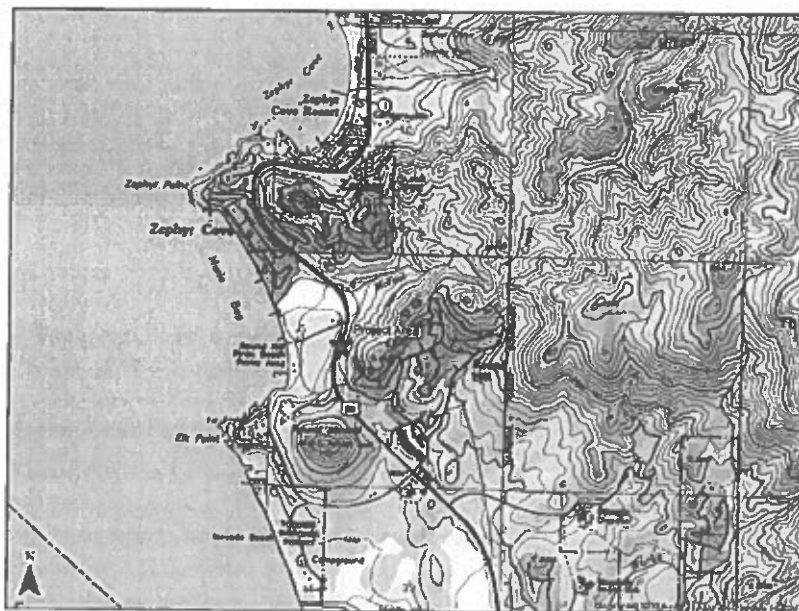
Please send comments to:

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South Lake Tahoe, CA 96150
malexander02@fs.fed.us

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is preparing an environmental assessment and preliminary engineering for a project to improve safety for visitors entering the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

Please share any comments you may have on the proposed project, and thank you for participating.



****In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record****



Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM

Comments:

I agree with moving the entry off the apex and having better turn lanes and acceleration & decel lanes

Like to see improved signage into the facility highway sign versus the F.S. Monument sign.

****In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record****



**Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM**

Contact Information:

Name: WEEB KENDALL

Address, City, Zip Code: 643 FROEL DR, ZEPHYR COVE, NV 89448

Email Address: GREGGINTAHOE@GMAIL.COM

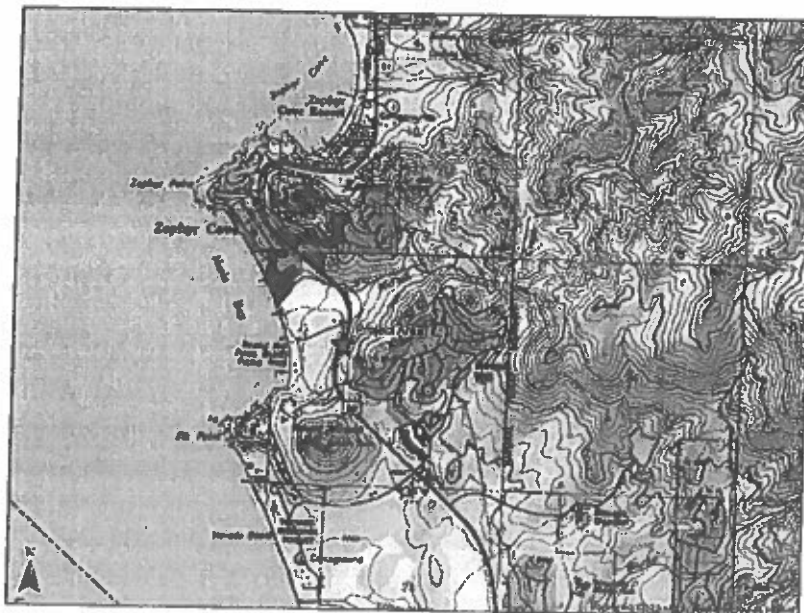
Please send comments to:

Mr. Thomas Parker, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.w.parker@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is preparing an environmental assessment and preliminary engineering for a project to improve safety for visitors entering the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

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Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM

Comments:

ROAD DIET SCHEME for LEFT HAND TURNS INTO AND
OUT of ROUND HILL PINES ENTRANCE. MAKING ONE TRAFFIC
LANE IN EACH DIRECTION AND BIKE PATHS on both SIDES
of THE ROAD to SEPARATE BICYCLES FROM CAR TRAFFIC.

MALIA BAY GID

PO BOX 1471

ZOPHYR COVE

HV 89448

In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record



**Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM**

Contact Information:

Name: Andrew Hickman for Round Hill GID
Address, City, Zip Code: PO Box 976 Zephyr Cove, NV 89448
Email Address: andrew@rhgid.org

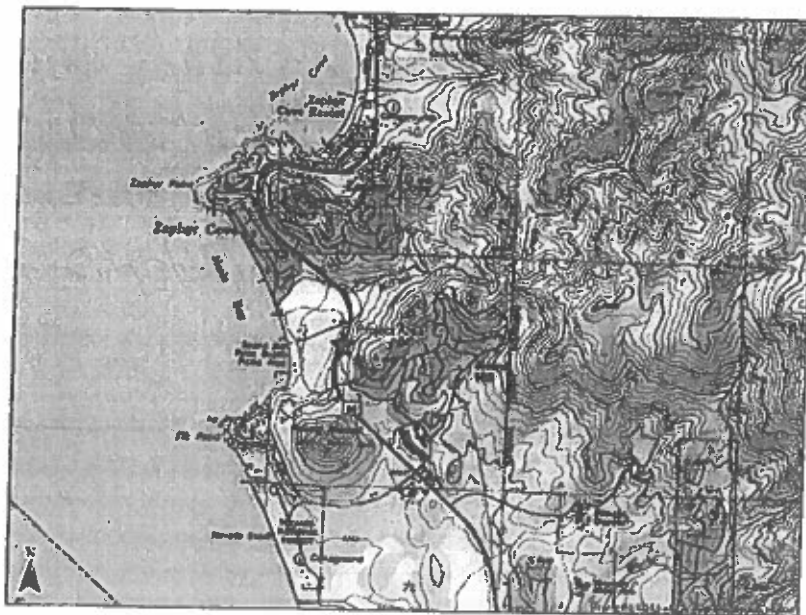
Please send comments to:

Mr. Thomas Parker, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.w.parker@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
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Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM

Comments:

Just an advisory comment.

I'm sure you will consider all of these structures that exist, or will.

- 8" water main on west side of Hwy 50 that parallels the highway-
- 6" water main running west toward the lake that connects to booster station on beach and also runs north to supply RHP Beach Resort and multiple residences.
- Sewer force main from the SW corner of Pinewild condominiums through the meadow and across Hwy 50.
- Existing water storage tank and all piping between tank and treatment facility building
- Future water storage tank.
- Future fencing to protect RHPGID facilities.

In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record



**Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM**

Contact Information:

Name: RAYMOND SIDNEY

Address, City, Zip Code: PO BOX 707, ZEPHYR COVE, NV 89448

Email Address: raysidney@gmail.com

Please send comments to:

Mr. Thomas Parker, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.w.parker@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is preparing an environmental assessment and preliminary engineering for a project to improve safety for visitors entering the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

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Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM

Comments:

I LIVE ON SIERRA SUNSET LN, IMMEDIATELY ADJACENT TO ROUND HILL PINES. THE OTHER RESIDENTS OF SIERRA SUNSET LN AND I APPRAISE THE EFFORT TO IMPROVE SAFETY FOR PEOPLE ENTERING/EXITING ROUND HILL PINES.

OUR PRIMARY CONCERN W.R.T. THIS PROJECT IS HOW IT AFFECTS THE SAFETY OF PEOPLE ENTERING/EXITING SIERRA ~~SUNSET~~ SUNSET LN. OUR SECONDARY CONCERN IS EASE OF ACCESS TO/FROM SIERRA SUNSET LN.

- IF RHP GETS A LEFT-HAND TURN LANE AND/OR SLOW-DOWN LANE AND/OR SPEED-UP LANE, THEN WE WOULD LIKE THAT LANE(S) TO CONTINUE AND BE ~~USEFUL~~ USABLE FOR SIERRA SUNSET LN. ACCESS
- WE DON'T WANT THIS PROJECT TO IMPEDE OUR ACCESS TO/FROM OUR HOMES ON SIERRA SUNSET LN. WE DON'T WANT TO HAVE TO QUEUE UP SOMEHOW BEHIND RHP ~~IN~~ INGRESS/EGRESS TRAFFIC.

PLEASE PUT ME ON ANY EMAIL LIST FOR COMMUNICATIONS ABOUT THIS PROJECT. THANKS!

In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record



Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM

Comments: Transit to Resort

Slow traffic
Add turning lane

Road Diet
left hand turn lane

Traffic Light

Modified Roundabout

One way in / One way out

Post No Parking along highway

Access to Roundhill Pines - during construction

Electric Vehicle parking @ Resort

Underpass to avoid cross traffic

****In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record****



**Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM**

Contact Information:

Name: Stephanie Grigsby
Address, City, Zip Code: 3379 West Road SLT, CA 96150
Email Address: grigsby@designworkshop.com

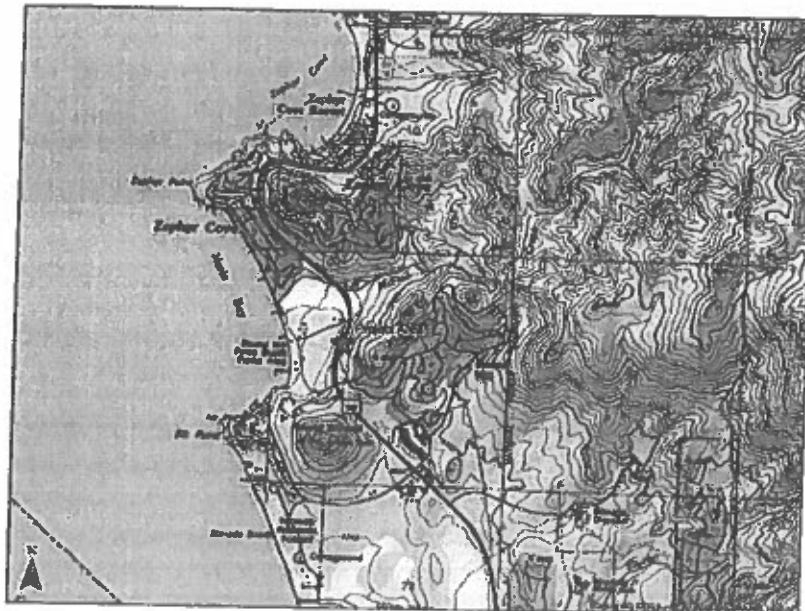
Please send comments to:

Mr. Thomas Parker, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.w.parker@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is preparing an environmental assessment and preliminary engineering for a project to improve safety for visitors entering the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

Please share any comments you may have on the proposed project, and thank you for participating.



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**Round Hill Pines Access Project
Public Meeting – April 23, 2019
COMMENT FORM**

Comments:

This is a highly needed project. I fully support.

****In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record****

From: [Kaiser, Reid](#)
To: [Parker, Thomas W \(FHWA\)](#)
Cc: [Edgar, Lindsay \(FHWA\)](#)
Subject: RE: Round Hill Pines
Date: Wednesday, April 3, 2019 12:06:02 PM

Thanks for the information and I will plan on attending the public meeting this month. Have a good day.

Reid G. Kaiser, PE
M (775) 229-5509

hdrinc.com/follow-us

From: Parker, Thomas W (FHWA) [mailto:Thomas.W.Parker@dot.gov]
Sent: Wednesday, April 3, 2019 10:55 AM
To: Kaiser, Reid <Reid.Kaiser@hdrinc.com>
Cc: Edgar, Lindsay (FHWA) <lindsay.edgar@dot.gov>
Subject: Round Hill Pines

Reid,

Per our conversation, below is a link to the project website that I referenced. I have also attached a flyer for the public meeting. Please feel free to share with anyone you think would be interested in attending the meeting.

<https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>

Regards,
Thomas W. Parker
Project Manager/ COE
Federal Highway Administration
Central Federal Lands Highway Division
12300 W. Dakota Ave., Suite 380
Lakewood, CO 80228
Work: (720) 963-3688
Mobile: (720) 908-0807



please consider the environment before printing this email

E mālama 'āina

From: huckbody@aol.com
To: [Parker, Thomas W \(FHWA\)](mailto:Parker, Thomas W (FHWA)@dot.gov)
Cc: dianenamoff@gmail.com; locolyn69@gmail.com; marty.michela@gmail.com; [Edgar, Lindsay \(FHWA\)](mailto:Edgar, Lindsay (FHWA)@dot.gov)
Subject: Re: US Highway 50 Round Hill Pines Access Project - Public Information Meeting Notice
Date: Thursday, March 28, 2019 8:40:01 PM

Mr. Parker,

Thank you for your reply, as I am sure the question will come up about the balance of HWY 50, as there are several areas like Round Hill from Spooner Summit down to Round Hill. Not sure if the plan is to take each of these areas one by one or at one time. Since the last NDOT Public meeting concerning HWY 50 there has not been any other update, so I am sure there are going to be some questions on what is going on.

Regards,
 Andy Huckbody

-----Original Message-----

From: Parker, Thomas W (FHWA) <Thomas.W.Parker@dot.gov>
 To: huckbody@aol.com <huckbody@aol.com>
 Cc: dianenamoff@gmail.com <dianenamoff@gmail.com>; locolyn69@gmail.com <locolyn69@gmail.com>; marty.michela@gmail.com <marty.michela@gmail.com>; [Edgar, Lindsay \(FHWA\)](mailto:Edgar, Lindsay (FHWA)@dot.gov) <lindsay.edgar@dot.gov>
 Sent: Thu, Mar 28, 2019 7:08 am
 Subject: RE: US Highway 50 Round Hill Pines Access Project - Public Information Meeting Notice

Andy,

Good morning and thank you for your interest in the project. We are early in the design stage and as such, the focus of this public scoping meeting is to solicit input from members of the public such as yourself. We have identified the project's purpose and need on the project website (provided below), and will be presenting this information at the meeting in April. As you detail in your comments, several design alternatives could be employed to address the purpose and need on this project. Our goal is to understand what the community sees as the needs in the area; so that we can refine the project and develop a suitable design solution. A second public meeting will be scheduled in the summer/fall to disclose our design concepts and solicit additional public feedback. I hope that you can attend the meeting.

Purpose

The purpose of the project is to increase safety and improve accessibility for motorists, pedestrians, and bicycles entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US50) in Douglas County, Nevada.

Need

The project is needed because the current US50 entrance configuration into the Round Hill Pines Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US50. In addition to the current configuration, the Round Hill Pines Resort access road contains a narrow roadway width, steep grades, and sharp curves. This limits the flow for two-way traffic containing transit and recreational vehicles. The specific needs driving the project are discussed in further details below.

- Safety
 - Limited Sight Distance
 - Unprotected turning movements across US50
 - Vehicle queuing in the EB inside lane of US50 during peak visitation periods
- Accessibility
 - Current access road geometry
 - Bike/pedestrian accommodations

Regards,
Thomas W. Parker
Project Manager/ COE
Federal Highway Administration
Central Federal Lands Highway Division
12300 W. Dakota Ave., Suite 380
Lakewood, CO 80228
Work: (720) 963-3688
Mobile: (720) 908-0807



please consider the environment before printing this email

E mālama ‘āina

From: huckbody@aol.com [mailto:huckbody@aol.com]
Sent: Wednesday, March 27, 2019 4:04 PM
To: Parker, Thomas W (FHWA) <Thomas.W.Parker@dot.gov>
Cc: dianenamoff@gmail.com; locolyn69@gmail.com; marty.michela@gmail.com
Subject: Fwd: US Highway 50 Round Hill Pines Access Project - Public Information Meeting Notice

Mr Parker,

Thank you for the meeting notice and as a Round Hill Pines buoy Customer, we are happy to hear there are going to be some road improvements getting into/out of this location. Looking through the material which had been sent, I do not believe I saw what the plans may be? It is not clear if the suggestion is moving the current entrance, having an entrance and/or exit, having a east bound turn lane, having a west bound turn lane, slower the speed limit, etc.? I believe turn lanes with a slower speed limit at least on the weekends could solve the current safety issues. Not sure how we can comment without seeing what the various plans may be?

Since this is a 2020 project, I am also wondering when NDOT is now planning on addressing the other safety, road issues, we have on HWY 50 from the Summit to State Line?

Regards,
Andy Huckbody
Lakeridge GID Chairman
775 790 7476

-----Original Message-----

From: Edgar, Lindsay (FHWA) <lindsay.edgar@dot.gov>
Sent: Wed, Mar 27, 2019 10:17 am
Subject: US Highway 50 Round Hill Pines Access Project - Public Information Meeting Notice

PUBLIC INFORMATIONAL MEETING FOR ROUND HILL PINES

ACCESS PROJECT

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Forest Service, Lake Tahoe Basin Management Unit (USFS), the Tahoe Regional Planning Agency, and the Nevada Department of Transportation, is seeking comments on the Proposed Action for the Round Hill Pines Access Project. The Proposed Action is to improve safety for visitors entering and existing the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 1 mile.

In recognition of the need to improve safety at this location, FHWA-CFLHD is conducting an Environmental Assessment (EA) study as part of the National Environmental Policy Act (NEPA) and Tahoe Regional Planning Compact processes. This study will investigate existing transportation conditions, and identify and evaluate potential environmental impacts of a preferred alternative. The Round Hill Pines Access Project is in the initial scoping phase of the NEPA analysis. We are asking for your comments on the Proposed Action. This scoping notice is intended to provide those interested in or affected by this project with an opportunity to make their concerns known. Work on this project is currently in the environmental compliance and preliminary engineering phase.

The first meetings will be held at the following locations and times:

**Tuesday, April 23, 2019
5:00 to 8:00 p.m.
Presentation: 6:00 p.m.
United States Forest Service,
Lake Tahoe Basin Management Unit Office
35 College Drive
South Lake Tahoe, CA 96150**

Information will be shared at the meeting on the project and environmental process. Public input will be gathered regarding the project purpose and need and goals and issues that are important to the community. The FHWA and its partners encourages community members to attend to provide input on this important project.

For more information on the Round Hill Pines Access Project, please see the attached flyer or visit the project's website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>. Those unable to attend the meetings can provide input by contacting the project manager, Mr. Thomas Parker, via email to thomas.w.parker@dot.gov or by telephone at (720) 963-3688.

Thanks,

Lindsay Edgar
Environmental Protection Specialist
Federal Highway Administration
Central Federal Lands
12300 W. Dakota Avenue, Suite 280
Lakewood, CO 80228
720-963-3684
lindsay.edgar@dot.gov

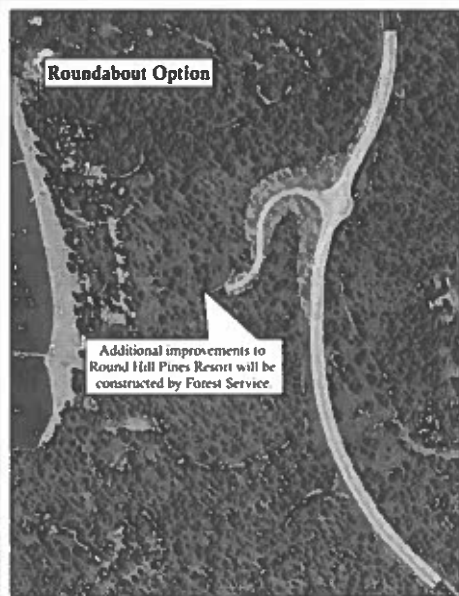
Round Hill Pines Access Project
U.S. Highway 50
Zephyr Cove, Nevada



The Federal Highway Administration Central Federal Lands Highway Division (FHWA-CFLHD), in cooperation with the USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50. The project begins south of the existing entrance into the resort and extends north along US 50 for approximately 0.35 mile in Douglas County near Zephyr Cove, Nevada.

Purpose of Public Meeting #2

FHWA-CFLHD is conducting an Environmental Assessment (EA) as part of the National Environmental Policy Act (NEPA) process. This assessment will investigate the existing transportation conditions and identify and evaluate potential improvements and environmental impacts. The public meeting is intended to provide those interested in or affected by this project with an opportunity to review the improvement options and make comments.



Roundabout Option:

Relocate the Round Hill Pines access road 0.2-mile to the north.

Construct roundabout at the new Round Hill Pines access road and US 50 intersection.



Signal Option:

Relocate the Round Hill Pines access road 0.2-mile to the north and add traffic signal.

Construct a median northbound left turn lane on US 50 for vehicles entering Round Hill Pines.



Accel/Decel Lane Option:

Relocate the Round Hill Pines access road 0.2-mile to the north.

Construct a median northbound left turn lane on US 50, as well as acceleration and deceleration lanes.

Public Meeting #2

Wednesday, September 25, 2019
5:00—7:00 p.m.

Presentation: 5:15 p.m.
 LTBMU Supervisor's Office
 35 College Drive
 South Lake Tahoe, CA 96150

Contact Information

Thomas Sohn, P.E.
 Project Manager
 Federal Highway Administration
 U.S. Department of Transportation
 (720) 963-3637
 E-mail: thomas.sohn@dot.gov

Michael Alexander, P.E.
 LTBMU
 (530) 543-2864
 E-mail: michael.t.alexander@usda.gov



US Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue
Lakewood, CO 80228



**PUBLIC INFORMATIONAL MEETING FOR
ROUND HILL PINES ACCESS PROJECT**

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FHWA-CFLHD is conducting an Environmental Assessment (EA) as part of the National Environmental Policy Act (NEPA). This assessment will investigate existing transportation conditions and identify and evaluate potential improvements and environmental impacts. This public meeting is intended to provide those interested in or affected by this project with an opportunity to review the improvement options and make comments. Work on this project is currently in the environmental compliance and preliminary engineering phase. The meeting will be held at the following location and time:

**Wednesday, September 25, 2019
5:00 to 7:00 p.m.
Presentation: 5:15 p.m.
LTBMU Supervisor's Office
35 College Drive
South Lake Tahoe, CA 96150**

For more information on the Round Hill Pines Access Project, please visit the project's website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>. Those unable to attend the meetings can provide input by contacting the project manager, Mr. Thomas Sohn, via email to thomas.sohn@dot.gov or by telephone at (720) 963-3637.

Pub: September 13, 2019 Ad#0000483034

From: Edgar, Lindsay (FHWA)
Bcc: Idurkee@carson.org; shelly@tristatecommercial.com; Heather@carraranv.com; kiewis@douglasnv.us; kara@fnttahoe.com; Hoefler, Anjanette -FS; Alexander, Michael T -FS; mgabor@fs.fed.us; elizabeth.blann@hardrockcasinolaketahoe.com; carol@LTVa.org; HUCKBODY@aol.com; jesse@keoptahoeblue.org; Leila@keoptahoeblue.org; Cartwright, Devin; WStory@dot.nv.gov; SSulahria@dot.nv.gov; lawrence@dcnr.nv.gov; ddapolito@parks.nv.gov; javattahoe@gmail.com; nevadaclearinghouse@lands.nv.gov; sally.gardner@pacunion.com; tc@tcarlson.biz; Andrew@rhgid.org; ppape@rhgid.org; info@rhgid.com; sltharold@sbcglobal.net; annehdavidson@gmail.com; tonia.elkins@outlook.com; epalazzo@cityofslt.us; lee.f.moisio@gmail.com; sharon@staor.org; theochoas3@charter.net; aberry@tahoefund.org; smerrill@benchmark.com; tc@thecashmancompanies.com; tahoe drums@icloud.com; nicolemisfeldt@outlook.com; chasty.tahoetransportation.org; dhughes@tahoetransportation.org; sfriedman@trpa.org; nhaven.trpa.org; sudeep@unr.edu; dustin.f.finkelson@uscg.mil; iflower@fs.fed.us; mbeall@vailresorts.com; jgalassini@washoecounty.us; rlpalmer@shpo.nv.gov; greggintahoe@gmail.com; kmeglena@gmail.com; raysidney@gmail.com; sgrigsby@designworkshop.com; KrisKnx@aol.com; Klaus@aboutyourhaus.com; Reid.Kaiser@HDRINC.com; paula@Southtahoenow.com; Sohn, Thomas (FHWA); bob@camprichardson.com
Subject: US Highway 50 Round Hill Pines Access Project - Public Information Meeting Notice
Date: Monday, September 9, 2019 1:09:00 PM
Attachments: Round Hill Pines Access Flyer bifold mailer September2019 FINALreduced.pdf

PUBLIC INFORMATIONAL MEETING FOR ROUND HILL PINES ACCESS PROJECT

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50. The project begins south of the existing entrance into the resort and extends north along US 50 for approximately 0.35 mile. The project is located in Douglas County near Zephyr Cove, Nevada.

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The meeting will be held at the following location and time:

Wednesday, September 25, 2019
5:00 to 7:00 p.m.
Presentation: 5:15 p.m.
LTBMU Supervisor's Office
35 College Drive
South Lake Tahoe, CA 96150

For more information on the Round Hill Pines Access Project, please visit the project's website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>. Those unable to attend the meetings can provide input by contacting the project manager, Mr. Thomas Sohn, via email to thomas.sohn@dot.gov or by telephone at (720) 963-3637.

Lindsay Edgar

Environmental Protection Specialist
Federal Highway Administration – Central Federal Lands
12300 W. Dakota Avenue, Suite 280
Lakewood, CO 80228
720-963-3684
lindsay.edgar@dot.gov



Lake Tahoe Basin Mgt Unit


[Forest Service Home](#) [About the Agency](#) [Contact the National Office](#)

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Lake Tahoe Basin Mgt Unit

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- » Recreation
- » Alerts & Notices
- » Passes & Permits
- » Maps & Publications
- » Land & Resources Management
- » Learning Center
- » Working Together
- » About the Forest

» News & Events

Contact Information

**U.S. Forest Service
Lake Tahoe Basin
Management Unit
Forest Supervisor's
Office**
35 College Drive
South Lake Tahoe, CA
96150
Voicemail: (530) 543-2600
TTY: (530) 543-0956
Hours: Mon thru Fri
8 a.m. to 4:30 p.m.



Stay Connected



Contact Us

Public informational meeting for Round Hill Pines Access Project

Contact(s): **Federal Highway Administration, Thomas Sohn 720-963-3637**

SOUTH LAKE TAHOE, Calif., - The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Tahoe Regional Planning Agency (TRPA), and the Nevada Department of Transportation (NDOT), is proposing to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50. The project begins south of the existing entrance into the resort and extends north along US 50 for approximately 0.35 mile. The project is located in Douglas County near Zephyr Cove, Nevada.

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The meeting will be held at the following location and time:

Wednesday, September 25, 2019

5:00 to 7:00 p.m.

Presentation: 5:15 p.m.

LTBMU Supervisor's Office

35 College Drive

South Lake Tahoe, CA 96150

For more information on the Round Hill Pines Access Project, please visit the project's website at <https://flh.fhwa.dot.gov/projects/nv/round-hill-pines/>. Those unable to attend the meetings can provide input by contacting the project manager, Mr. Thomas Sohn, via email to thomas.sohn@dot.gov or by telephone at (720) 963-3637.

Alerts & Warnings

- ⚠ Attention! Bonfires and campfires prohibited on beaches at Lake Tahoe
- ⚠ Attention! Portable charcoal grills prohibited on all Forest Service beaches
- » Follow precautions against plague
- » View Forest Orders
- » Regulations for Forest Users

[View All Forest Alerts ...](#)



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: Kelly Krolidcki
 Address, City, Zip Code: PO Box 354, Zephyr Cove, NV 89448
 Email Address: kkrolidcki@usn.com

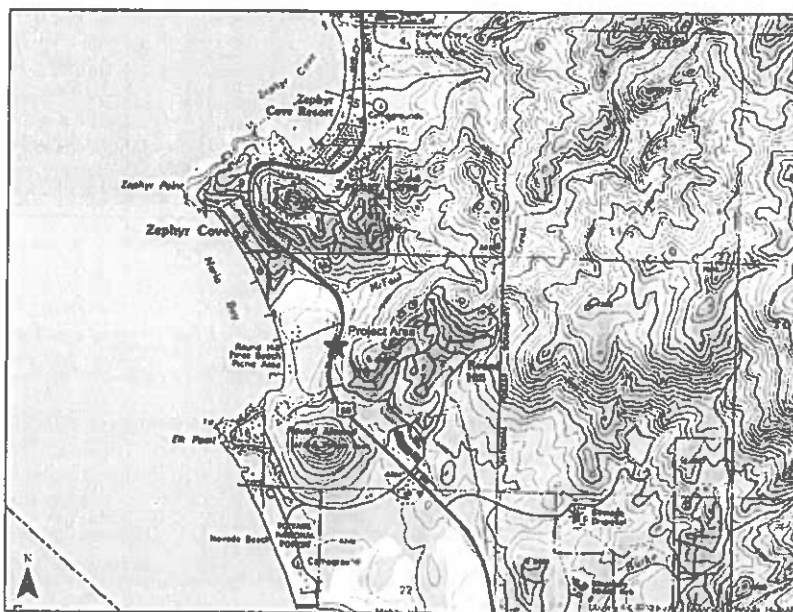
Please send comments to:

Mr. Thomas Sohn, Project Manager
 Federal Highway Administration
 12300 West Dakota Ave., Ste. 380
 Lakewood, CO 80228
 thomas.sohn@dot.gov

Mr. Michael Alexander, PE
 US Forest Service, Lake Tahoe Basin Management Unit
 35 College Drive
 South Lake Tahoe, CA 96150
 malexander02@fs.fed.us

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the USDA Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), is preparing an environmental assessment for a project to improve safety for visitors entering the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County near Zephyr Cove, Nevada. The project begins south of the existing entrance into the resort and extends along US 50 for approximately 0.35 mile.

Please share any comments you may have on the proposed project, and thank you for participating.



****In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record****



Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

Accel/Decel Lane option is the
only reasonable option.

In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: _____

Address, City, Zip Code: _____

Email Address: _____

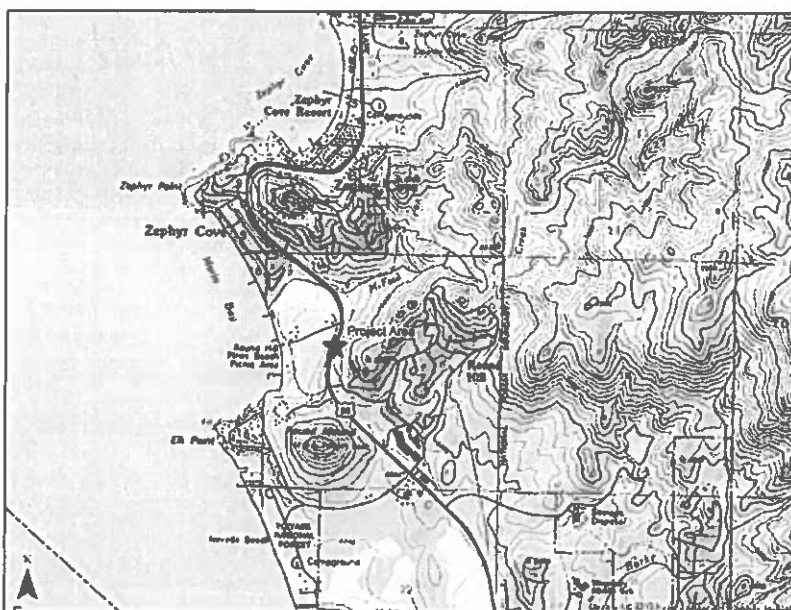
Please send comments to:

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Federal Highway Administration
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Lakewood, CO 80228
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35 College Drive
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Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

- 1) isn't 3rd objective to increase
accessability to resort? (for 4
mos/yr)
- 2) How much increased parking
is there?
- 3) NDOT has need to prioritize
their resources to benefit
the entire corridor not just
access — increased revenue —
to RHP resort

In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name:

Suzanne Harris

Address, City, Zip Code:

P.O. Box 10615 (625 Lakeview Dr.) Zephyr Cove NV 89448

Email Address:

7 momofsea@charter.net

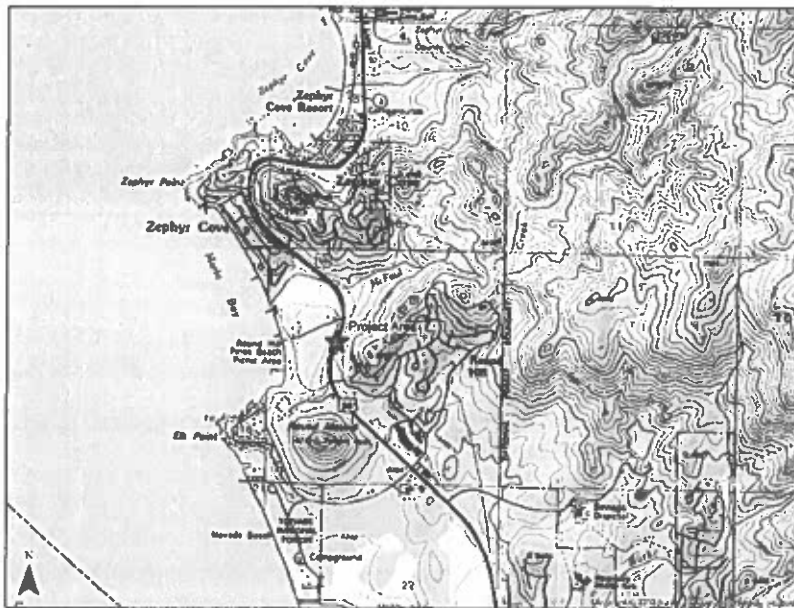
Please send comments to:

Mr. Thomas Sohn, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.sohn@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
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Please share any comments you may have on the proposed project, and thank you for participating.



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Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

I definitely believe that accel/decel is the best option. It would solve most of the safety concerns while keeping traffic flowing.

Roundabout would contribute to traffic jams in my opinion as people wait to enter the beach.

A light would cause frustration and not help with the overall problem as well as accel/decel.



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: Richard Orjevolk
 Address, City, Zip Code: NDOT DII 310 Galleggi Way Sparks NV
 Email Address: rorjevolk@dot.nv.gov 94431

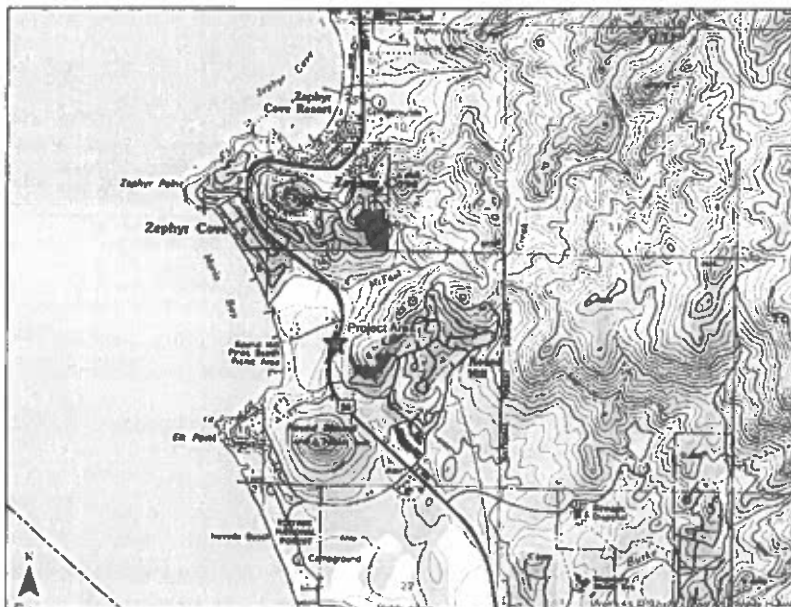
Please send comments to:

Mr. Thomas Sohn, Project Manager
 Federal Highway Administration
 12300 West Dakota Ave., Ste. 380
 Lakewood, CO 80228
 thomas.sohn@dot.gov

Mr. Michael Alexander, PE
 US Forest Service, Lake Tahoe Basin Management Unit
 35 College Drive
 South Lake Tahoe, CA 96150
 malexander02@fs.fed.us

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Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

We (NDOT) know you are already but
please continue to coordinate permitting
info/questions through our designated
NDOT contact (Sajid) and please add
me to mailing list.

Thanks !

[Signature]



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: GREGG KENDALL

Address, City, Zip Code: PO BOX 12398 ZEPHYR COVE, NV. 89448

Email Address: GREGGKENDALL@GMAIL.COM.

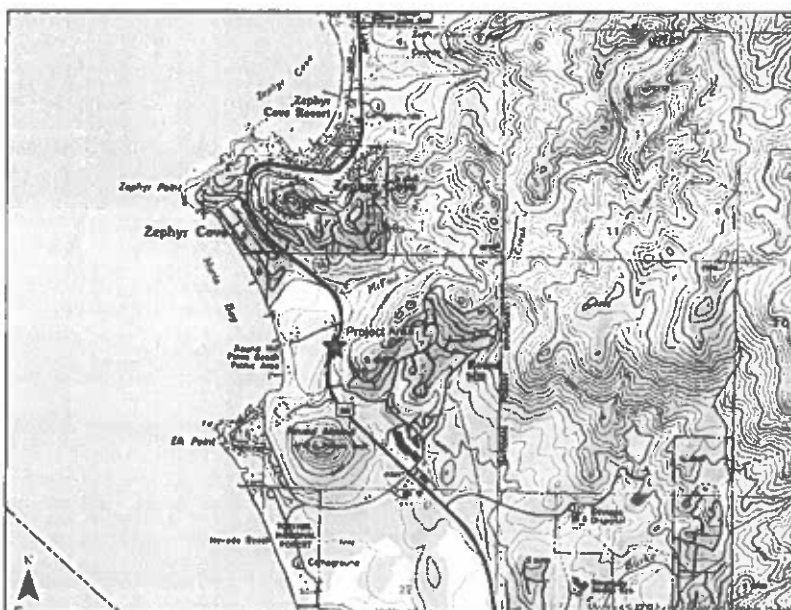
Please send comments to:

Mr. Thomas Sohn, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.sohn@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

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Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

YOU DON'T HAVE ENOUGH INFO FOR US.

YOU DON'T KNOW WHAT IS GOING TO HAPPEN WITH
THE SIGNAL OPTION WHEN THE PARK IS CLOSED.

YOU ARE HAPPY TO CONSIDER THE ACCE/DECE2 OPTION
WHEN YOU ACKNOWLEDGE THERE ISN'T ROOM FOR
BIKE LANES

WHERE IS THE ALLOCATION FOR BIKE LANES?



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: RAYMOND SIDNEY

Address, City, Zip Code: PO BOX 707, ZEPHYR COVE, NV 89448

Email Address: raysidney@gmail.com

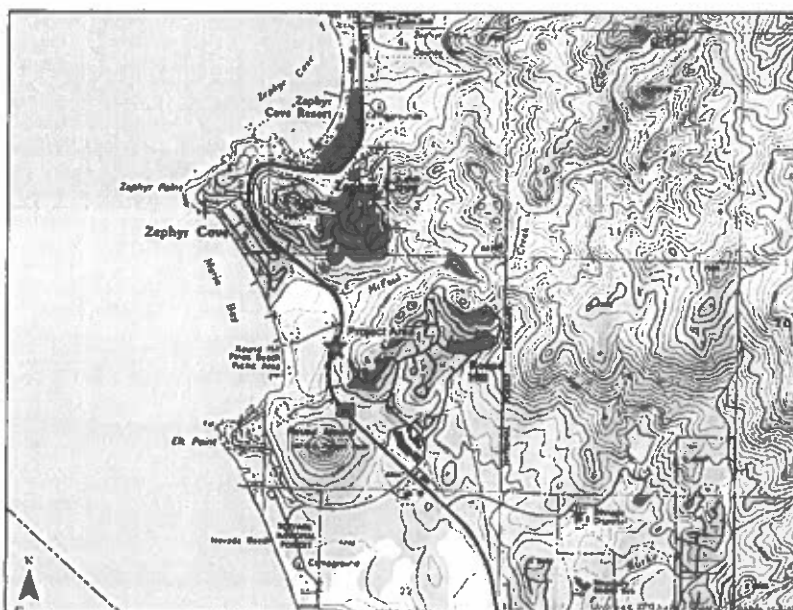
Please send comments to:

Mr. Thomas Sohn, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.sohn@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

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Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

OF THE 3 PROPOSED POSSIBILITIES,
THE SIGNAL AND THE ACCEL/DECEL LANE
OPTIONS ARE VIABLE. THE ROUNDABOUT IS
NOT VIABLE.

PLEASE KEEP IN ~~MY~~ MIND ACCESS FOR SIERRA
SUNSET LN, AND MAKE SURE ITS RESIDENTS
SEE MINIMAL NEGATIVE IMPACT. PLEASE ADDITIONALLY
ENSURE THEY CAN GET MAXIMUM ~~AND~~ BENEFIT
FROM ACCEL/DECEL LANES.

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**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: RITA + JOSEPH BIENZ

Address, City, Zip Code: P.O. BOX 748, Z.C. NV. 89448

Email Address: ROUND HILL HOMEOWNERS

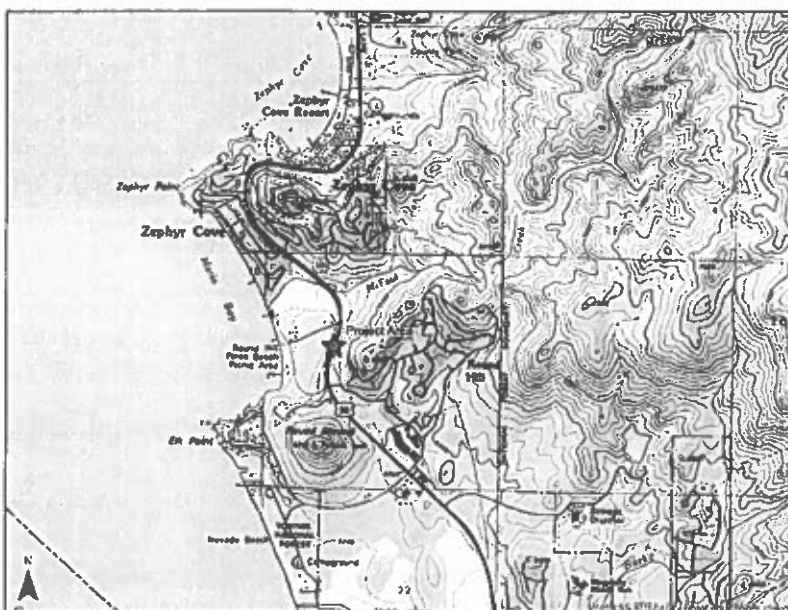
Please send comments to: WE ARE VERY MUCH FOR THE "ACCEL/DECEL LANE OPTION"

Mr. Thomas Sohn, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.sohn@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

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**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Comments:This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.

****In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record****



**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: Jerry Klosterboer
Address, City, Zip Code: P.O. Box 104 Zephyr Cove, NV. 89448
Email Address: Klosterboer50@gmail.com

Please send comments to:

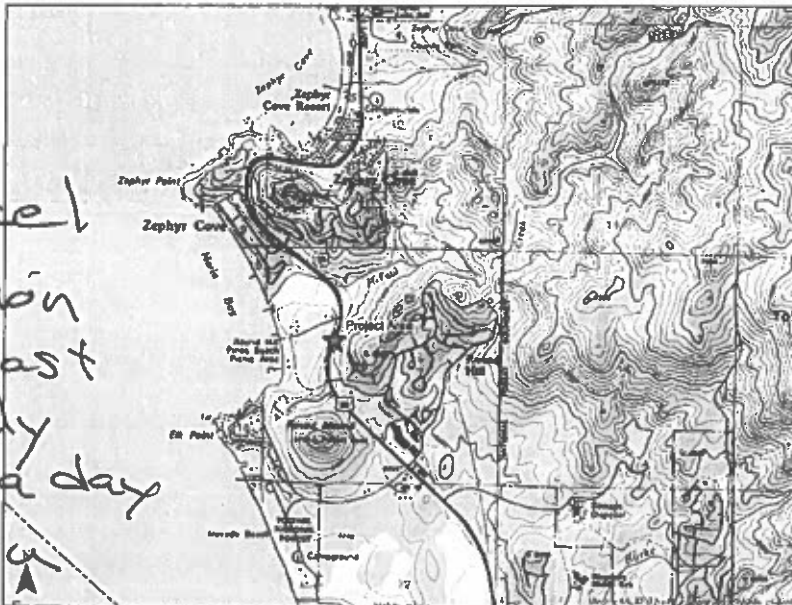
Mr. Thomas Sohn, Project Manager
Federal Highway Administration
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Lakewood, CO 80228
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Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
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Please share any comments you may have on the proposed project, and thank you for participating.

I strongly
Support
the
Access/Develop
Lake Option
I drive past
project daily
6-10 times a day
Thank You
Jerry Klosterboer



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**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

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**Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM**

Contact Information:

Name: Bruce Steger
Address, City, Zip Code: PO Box 10927 Zephyr Cove NV
Email Address: brucestegeris@gmail.com

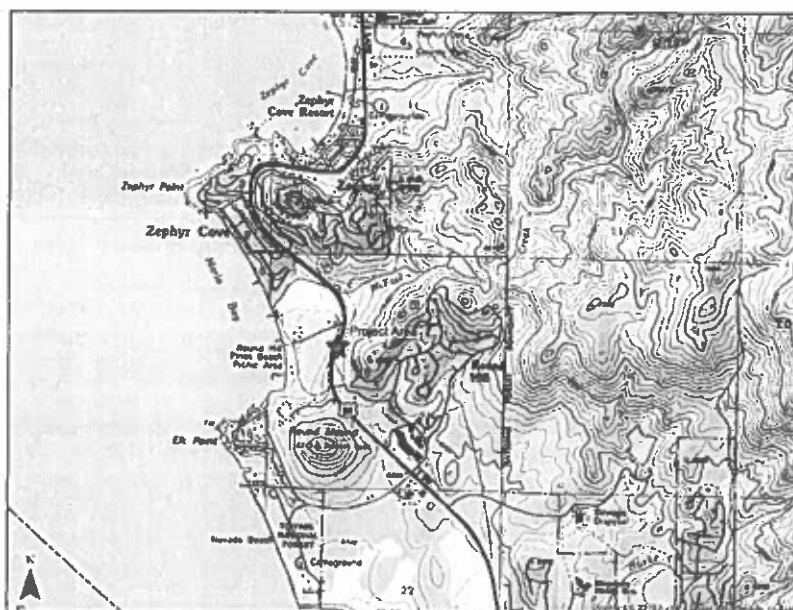
Please send comments to:

Mr. Thomas Sohn, Project Manager
Federal Highway Administration
12300 West Dakota Ave., Ste. 380
Lakewood, CO 80228
thomas.sohn@dot.gov

Mr. Michael Alexander, PE
US Forest Service, Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150
malexander02@fs.fed.us

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Round Hill Pines Access Project
Public Meeting – September 25, 2019
COMMENT FORM

Comments:

I have had many driving experiences in Europe as a Thermo King Refrigeration Instructor/Troubleshooter. In heavy traffic many roundabouts have lights added as they did NOT work but slowed traffic to the point of stop and go at times.

In order to receive an official reply please provide a name and mailing address or email address. Also please note that names and addresses provided become part of the public record

9/13/2019

RE: Nevada State Clearinghouse Notice E2020-53 (E2020... - NevadaClearinghouse

RE: Nevada State Clearinghouse Notice E2020-53 (E2020-53 Public Informational Meeting for Round Hill Pines Access Project - Douglas County)

Sue Gaskill

Thu 9/12/2019 8:30 AM

To: Thomas Pyeatte <tpyeatte@water.nv.gov>; NevadaClearinghouse <NevadaClearinghouse@lands.nv.gov>;

NEVADA STATE CLEARINGHOUSE

Department of Conservation and Natural Resources, Division of State Lands
901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
(775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 09/10/2019

U.S. Federal Highway Administration

Nevada State Clearinghouse Notice E2020-53

Project: E2020-53 Public Informational Meeting for Round Hill Pines Access Project - Douglas County

Follow the link below to find information concerning the above-mentioned project for your review and comment.

E2020-53 - <http://clearinghouse.nv.gov/public/Notice/2020/E2020-53.pdf>

- **Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.**
- **Please reply directly from this e-mail and attach your comments.**
- **Please submit your comments no later than Tuesday September 24th, 2019.**

[Clearinghouse project archive](#)

Questions? Andre Emme, Program Manager, (775) 684-2733 or nevadaclearinghouse@state.nv.us

9/13/2019

RE: Nevada State Clearinghouse Notice E2020-53 (E2020... - NevadaClearinghouse

☐ No comment on this project ☐ Proposal supported as written

AGENCY COMMENTS:

Nevada State Clearinghouse

Department of Conservation and Natural Resources

901 South Stewart Street, Suite 5003

Carson City, NV 89701

775-684-2723

<http://clearinghouse.nv.gov>

www.lands.nv.gov

DATE: September 12, 2019

Division of Water Resources

Nevada SAI # E2020-053

Project: Public Informational Meeting for Round Hill Pines Access Project - Douglas County

☐ No comment on this project ☒ Proposal supported as written

AGENCY COMMENTS:

Water for Construction Projects

All Nevada water laws must receive full compliance.

Ensure that any water used on a project for any use shall be provided by an established utility or under permit or temporary change application or waiver issued by the State Engineer's Office with a manner of use acceptable for suggested projects water needs.

Appendix B

**NV FLAP US 50(1) Round Hill Pines Access - Sierra Sunset Lane
Memorandum**



U.S. Department
of Transportation
Federal Highway
Administration

Memorandum

Subject: NV FLAP US50(1)
Round Hill Pines Access – Sierra Sunset
Lane

Date: 9/1/21

From: Ryan Mathis
Project Manager
Central Federal Lands Highway Division

To: Nevada Department of Transportation
Tahoe Regional Planning Agency
United States Forest Service

The purpose of this memorandum is to evaluate the Round Hill Pines Access project's effect on Sierra Sunset Lane's intersection with US 50 as it pertains to safety and accessibility.

Project Background

The Federal Highway Administration Central Federal Lands Highway Division (CFLHD), in cooperation with the United States Department of Agriculture (USDA) Forest Service Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), proposes to improve safety and accessibility for visitors entering and exiting Round Hill Pines Resort (Resort) from U.S. Highway 50 (US 50). The project begins south of the existing entrance into the Resort and extends north along US 50 for approximately 0.35-mile. The project is located in Douglas County near Zephyr Cove, Nevada.

The project is necessary because the current US 50 entrance configuration into the Resort has safety and accessibility concerns due to limited sight distances for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50 for vehicles accessing the Resort (see CFLHD Round Hill Pines Access Intersection Design Memo in Appendix I for sight distance exhibits).

In addition to the current entrance's location along US 50, the existing Resort access road has narrow substandard and inconsistent lane widths, steep grades, and sharp curves. This configuration limits the flow of two-way traffic that at times may include transit and recreational vehicles. The specific needs driving the project are discussed in further details below.

- The existing Resort access road is located just north of a crest of a vertical curve along US 50, which results in limited sight distance for both travel directions. Sight distance for passenger vehicles south of the existing Resort access road is below the recommended standard sight distance values. This substandard sight distance presents

a safety hazard for vehicles exiting the Resort and turning north onto eastbound US 50, as well as eastbound US 50 traffic.

- During the peak season, eastbound US 50 experiences vehicle queuing and congestion in the inside lane. This is caused by Resort visitors waiting to make unprotected turning movements across westbound US 50 onto the Resort access road.
- The existing Resort access road is narrow with an inconsistent width that only allows one-way traffic in multiple locations, sharp turns, and a steep grade, which limits two-way traffic and access for larger vehicles such as: recreation vehicles, transit vehicles, and trailers.
- The proposed Resort access road location will allow for better access to a future United States Forest Service (USFS) project that includes new parking lots at the Resort.

In addition to relocating the Resort access road to the north for improved sight distance, the project also adds safety improvements to US 50 by widening to accommodate a northbound left turn lane onto the proposed Resort access road and a northbound acceleration lane for those turning left onto US 50 from the proposed Resort access road. Refer to Appendix I CFLHD Round Hill Pines Access Intersection Design Memo for information about the team decision making process.

Sierra Sunset Lane Description

Sierra Sunset Lane is a gated residential approach on the northern end of the project serving four parcels between the US 50 and the southeastern Lake Tahoe shoreline (see Douglas County Assessor Parcel Map in Appendix A). The approach is located on US 50 between US 50 Douglas County Milepost 2.69 and US 50 Douglas County Milepost 2.72 (see 1981 Entry Way & Access Roadway Plans in Appendix B). The south side of the four parcels shares a boundary with the USFS Round Hill Pines Resort which extends from US 50 down to the Lake Tahoe shoreline.

The current configuration of the Sierra Sunset Lane approach is paved with asphalt and has an approximately 90 ft. acceleration lane and an approximately 126 ft. deceleration lane adjacent to US 50 and are considered substandard in length. The acceleration and deceleration lanes are approximately 14 ft. wide. A 1981 occupancy permit describes the construction of the acceleration and deceleration lanes to be 130 ft. in length with a width of 9 ft (see 1981 Revocable Application and Permit for Occupancy of State Department of Transportation Right-of-Way in Appendix C).

A revocable occupancy permit that allows Sierra Sunset Lane to access US 50 was last granted by the Nevada Department of Transportation (NDOT) in 2014 (see 2014 Roadway Plan in Appendix D and the 2014 Revocable Application and Permit for Occupancy of Nevada Department of Transportation Right-of-Way in Appendix E). Although the current configuration of US 50 allows for left turns out of Sierra Sunset Lane onto US 50 and into Sierra Sunset Lane from US 50, this permit gives NDOT the right to modify, adjust, remove, relocate, or reduce the Sierra Sunset Lane approach to a right-in/right out only configuration as needed for future highway purposes.

Sierra Sunset Lane Traffic Study

The 2014 occupancy permit for Sierra Sunset Lane requires the permittee to comply with the terms and conditions listed on page 44 of the NDOT Terms and Conditions Relating to Right-of-Way Occupancy Permits booklet in Appendix H.

Page 44 of the booklet discusses the requirements necessary for a traffic study to be conducted as listed below and in Appendix H:

1. For commercial or residential subdivision developments that require direct access onto the Department's rights-of-way or highway system.
2. For commercial or residential subdivision developments that, although not directly accessing the Department's rights-of-way or highway, will have significant impact to the traffic on an existing highway.
3. If the usage of a previously permitted access point changes significantly, or if the conditions, which led to the traffic generation estimate, which was reported in a previous traffic study change significantly, a new traffic study will be required.

Regarding the traffic study criteria set forth by the number one and number two requirements listed above, Sierra Sunset Lane serves four existing parcels that already have access to US 50, and as such is not considered to be a new residential subdivision. The Sierra Sunset Lane subdivision development is also not within the project limits. Consequently, Sierra Sunset Lane does not meet the number one or number two requirements for a traffic study to be performed.

In reference to the traffic study requirement number three, listed above, the usage of the Sierra Sunset Lane access is not expected to change significantly upon completion of the Round Hill Pines Access project. Further, the US 50 traffic conditions are not expected to change significantly as a result of this project. Consequently, Sierra Sunset Lane does not meet the number three requirement for a traffic study to be performed.

Since Sierra Sunset Lane does not meet any of the above requirements, Sierra Sunset Lane does not meet the requirements for a traffic study.

Sierra Sunset Lane Intersection Sight Distance

The existing Sierra Sunset Lane intersection was analyzed for left and right turn intersection sight distance. Based on existing conditions, the standard sight distance for passenger vehicles approaching Sierra Sunset Lane from the south is 610 ft., and 500 ft. for passenger vehicles approaching Sierra Sunset Lane from the north (see Sierra Sunset Lane Intersection Sight Distance Exhibit in Appendix F).

For vehicles turning onto US 50 from Sierra Sunset Lane, the existing sight distance to the south is approximately 1080 ft., but only 401 ft. to the north instead of the standard 500 ft. The sight distance to the north could be improved by removing trees outside of the NDOT right-of-way, but since the purpose of this project is to improve safety and accessibility to federal lands, tree removal on private property is beyond the scope of this project.

For the proposed US 50 design, the southbound edge of traveled way was shifted approximately 3'- 6' ft. towards the Sierra Sunset Lane approach acceleration/deceleration lanes to accommodate the roadway width taper from the northern project limits to the proposed US 50 northbound acceleration lane for vehicles turning left onto US 50 from the proposed Resort access road. This

proposed widening to US 50 of 3'-6' to the west has no measurable effect to the available intersection sight distance for Sierra Sunset Lane (see Sierra Sunset Lane Intersection Sight Distance Exhibit in Appendix F).

Sierra Sunset Lane Turning Movements

US 50 will be widened immediately adjacent to Sierra Sunset Lane to accommodate the proposed US 50 northbound acceleration lane for the proposed Resort access road. Solid double yellow centerline striping will form the boundary for the acceleration lane taper to the north back to the existing 4 lane highway section, but will be interrupted in front of Sierra Sunset Lane to allow left turns out of and into Sierra Sunset Lane (see Appendix G for US 50 Signing and Pavement Markings plan sheet).

Since US 50 will be widened immediately adjacent to Sierra Sunset Lane, the existing non-standard acceleration and deceleration lanes on either side of Sierra Sunset Lane will be encroached upon by up to 3' at the end of the deceleration lane and up to 10' at the end of the acceleration lane. There are no plans to maintain the acceleration and deceleration lane widths due to their non-standard configuration and the terms of the 2014 Revocable Application and Permit for Occupancy of Nevada Department of Transportation Right-of-Way.

Although traffic queuing exists on occasion along US 50 prior to entering the existing Resort entrance road, it is not anticipated that vehicles, including maintenance or emergency vehicles, will be prevented from accessing Sierra Sunset Lane due to traffic queuing to the north along US 50 prior to entering the proposed Resort access road. Queuing would take place in the outside southbound lane, allowing maintenance and emergency vehicles to use the inside southbound lane to pass queued traffic until they could turn into Sierra Sunset Lane. It is anticipated that queued traffic would move enough at the intersection to allow maintenance or emergency vehicles to access Sierra Sunset Lane.

Further, it is anticipated that due to this project, there will be less queuing along US 50 because traffic will flow better into and out of the proposed Resort access road. The proposed Resort access road is wider, has a consistent width that supports two-way traffic, and fewer curves than the existing Resort access road. The existing Resort access road has rough pavement and sharp curves leading to slower vehicle speeds and forms a bottleneck that can only pass one-way traffic at the entrance due to substandard lane widths adjacent to the stone entrance walls.

Conclusions

The purpose of the Round Hill Pines project is to improve safety and accessibility to federal lands. The purpose of this memorandum is to evaluate the Round Hill Pines Access project's effect on Sierra Sunset Lane's intersection with US 50 as it pertains to traffic and safety.

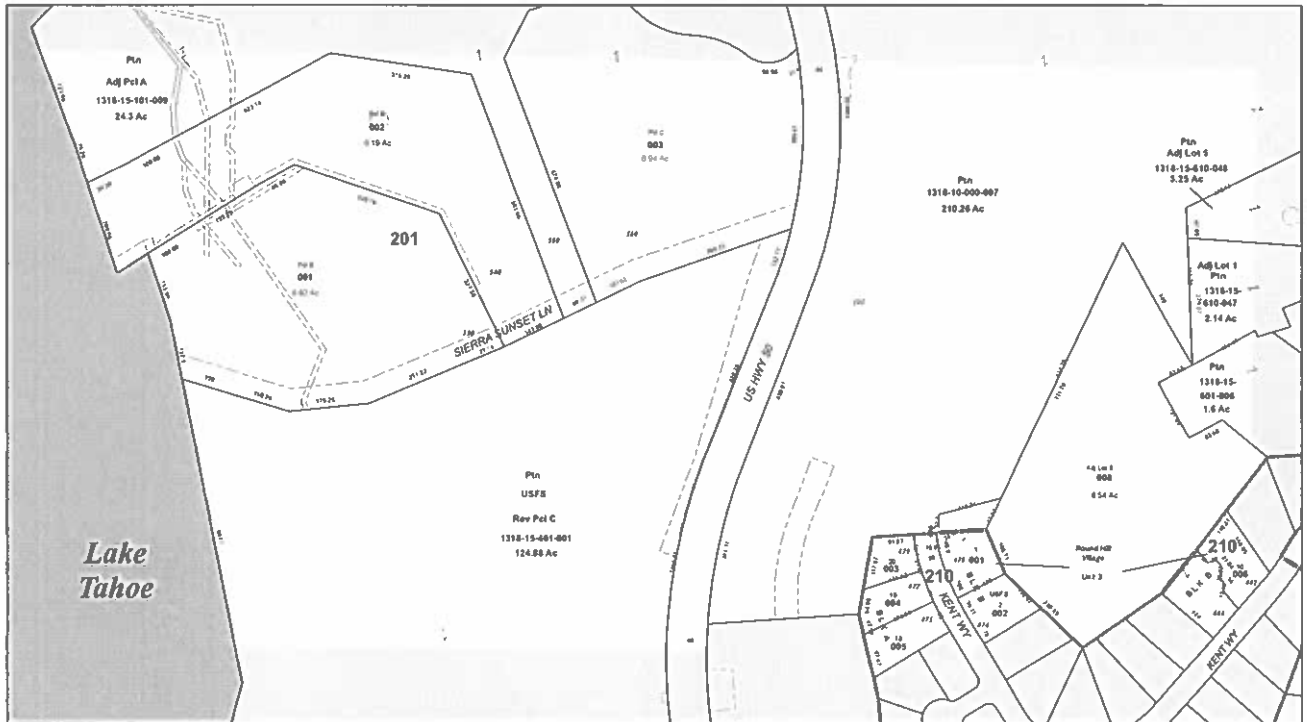
The project improves safety and accessibility to federal lands by providing safer ingress/egress for the Round Hill Pines Resort. Specific improvements to safety and accessibility include:

- Relocation of the Resort access road farther north along US 50 where the sight distance is improved to meet design standards.

- A Resort access road that has standard and consistent lane widths and fewer sharp curves.
- Addition of an acceleration lane on US 50 for those leaving the Resort headed northbound.
- Addition of a left turn lane for northbound US 50 traffic turning left onto the proposed Resort access road.

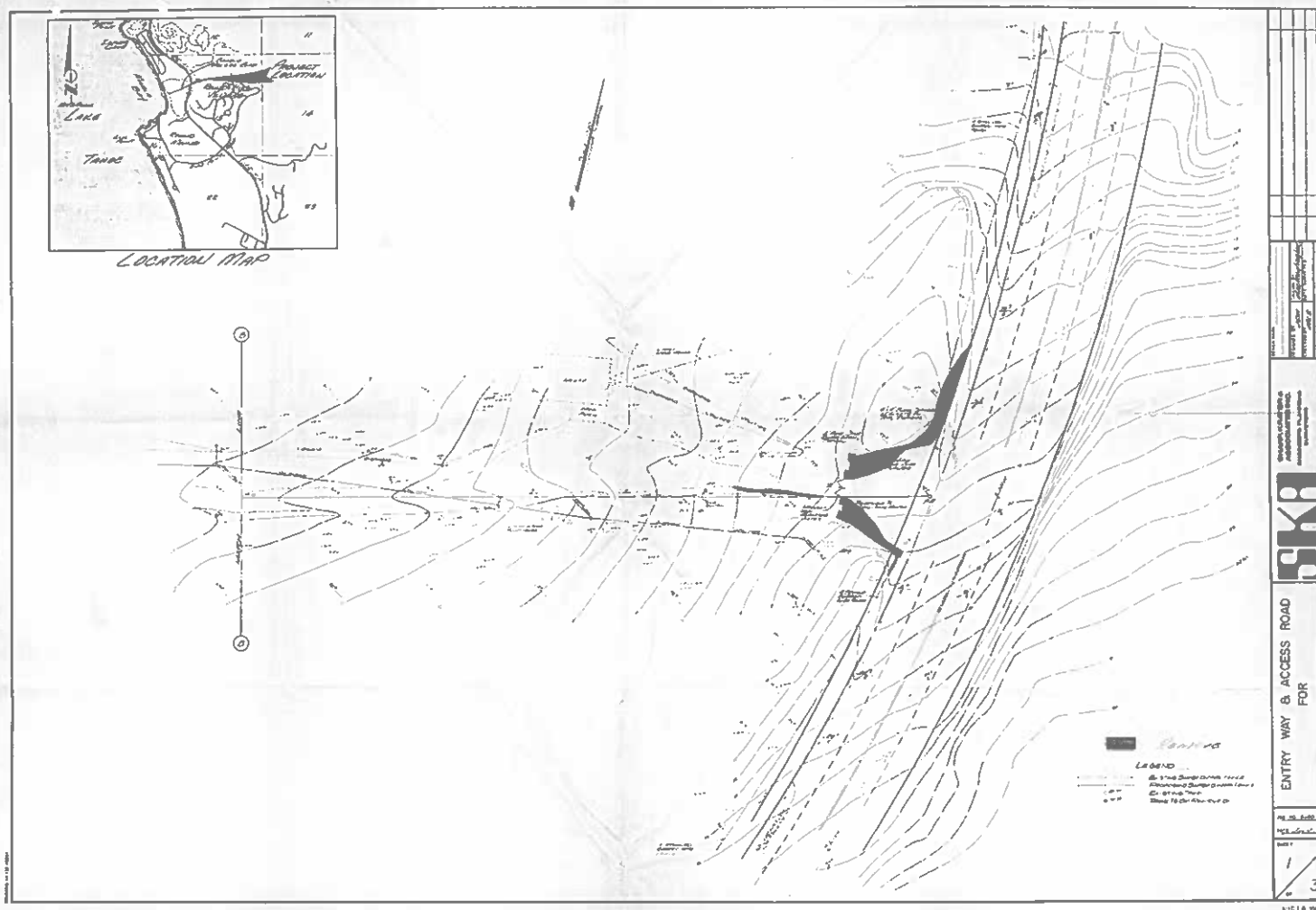
None of these improvements negatively affect the safety of Sierra Sunset Lane at the intersection with US 50. Traffic queuing along US 50 for vehicles waiting to enter the proposed Resort access road should be reduced due to a better flow of traffic in and out of the Resort, and maintenance and emergency vehicles will be able to access Sierra Sunset Lane as they do currently. Despite the proposed Round Hill Pines Resort Access Road moving closer to Sierra Sunset Lane, the turning movements at Sierra Sunset Lane are not affected either for left or right turns onto US 50 or from US 50 onto Sierra Sunset Lane.

Appendix A
– Douglas County Assessor Parcel Map

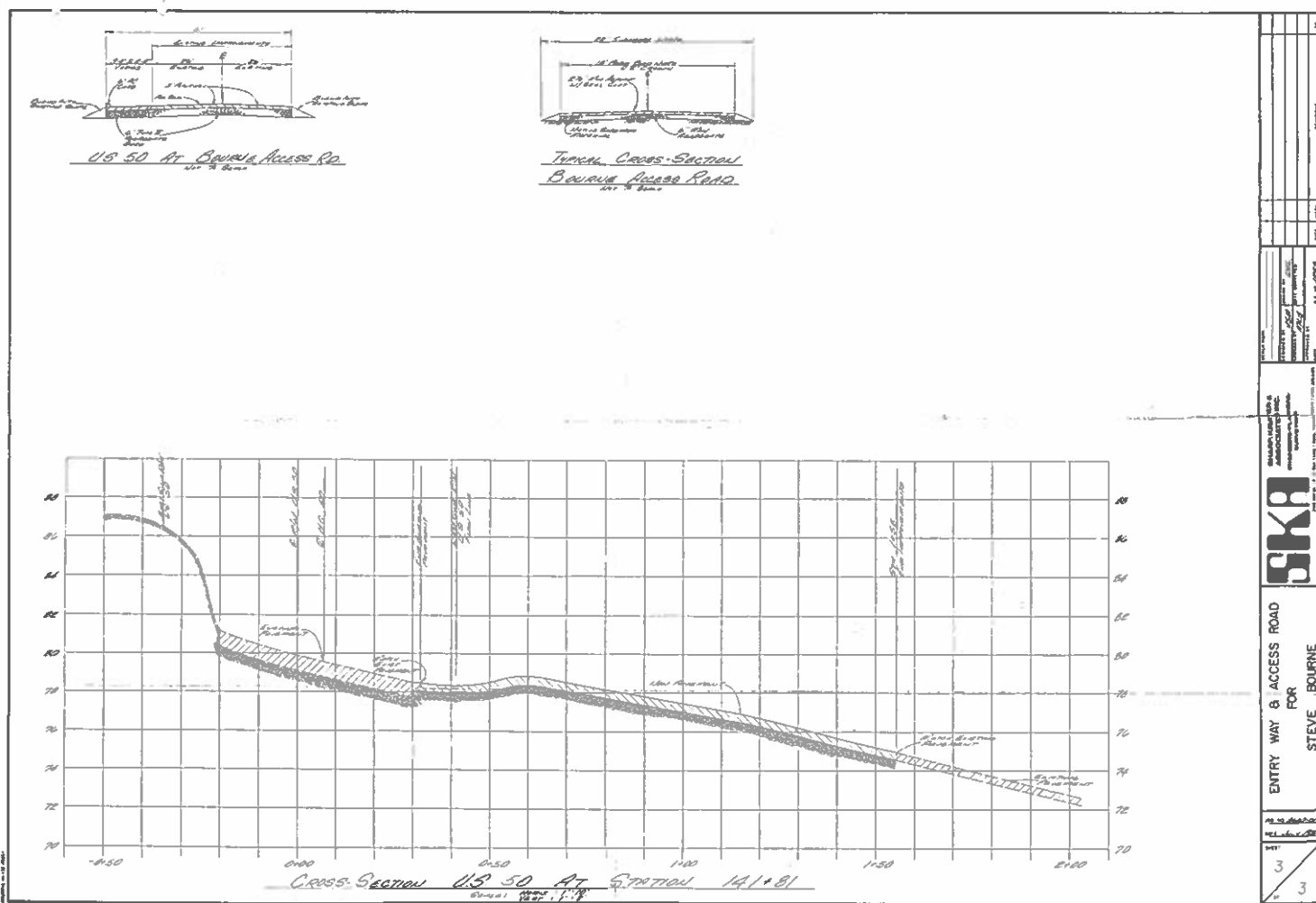


Appendix B

– 1981 Entry Way & Access Roadway Plans







AUG 10 2007

Appendix C

- 1981 Revocable Application and Permit for Occupancy of NDOT Right-of-Way

Revocable Permits

Bourne Stephen H

2 - 1666 - 81

9/29/81

APPLICATION AND PERMIT

FOR OCCUPANCY OF

STATE DEPARTMENT OF

TRANSPORTATION

RIGHT-OF-WAY

(UNDER THE PROVISIONS
OF NRS 408.955)

9/29/81

160

PERMIT NUMBER 2-166-81US 50 - DOG 2.69 + 2.75 2
(Milepost Number) (District No.)APPLICANT Stephen H. BourneTYPE OF WORK Up-grade the existing approach/Saw cut 1' into the existing travel lane

(For Department of Transportation Use)

A copy of this permit must be available at
the job site.August 10, 1981
(Date of Application)

1. Application is made for permission to excavate, construct, and/or otherwise occupy the STATE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY by performing the following work on HIGHWAY U. S. HIGHWAY 50, District No. 2
(local name of highway)

between US 50 Douglas County, 2.69 and US 50 Douglas County 2.75
(Milepost) (Milepost)

2. Full Description of Type and Scope of work.
(Use reverse side or extra sheets, as necessary)

Remove existing access road paving. Regrade access road to improve alignment and drainage conditions. Construct acceleration and deceleration lanes, 9 feet wide, and about 130 feet in length for each. Pave acceleration and deceleration lanes and driveway.

3. The Applicant must attach proof of approval from local governing agencies, when applicable. Where proposed county roads or streets are involved, the Applicant's request for approaches must be accompanied by evidence that an approved plat or plan is on file with the local planning commission or governing body, if required.
4. The Applicant must attach four (4) copies, each sheet of detailed plans/drawings or maps. This Permit will not be processed without detailed plans. Following are the minimum plan requirements.

- a. Highway alignment in relation to proposed work.
- b. Milepost or Highway Engineering Stationing.
- c. Drawing must be color coded, e.g., red: install or construct, green: remove, etc.
- d. Plans must be oriented directionally, i.e., tangent bearings, North arrows, etc.
- e. Highway right-of-way widths, boundaries, and/or property lines must be shown.
- f. Profile drawings showing an elevation view of proposed overhead or underground utility installations in relation to the roadway surface are required when applicable.
- g. Location of existing facilities, if changes or extensions are being proposed, must be delineated.
- h. Location of signs, barricades, flagmen, and other devices to protect the motoring and pedestrian traffic will be shown on the plans when applicable.
- i. Proposed and/or existing fencing, gates, and cattle guards must be shown.

5. Applicant will complete the following, if applicable:

- a. Excavations or Bore: NONE

<u>Width</u>	<u>Depth</u>	<u>Length</u>	<u>Description:</u> No. of wire, cable, voltage, etc.
--------------	--------------	---------------	--
- b. Pipes: NONE

<u>Kind</u>	<u>Diameter</u>	<u>Low or high pressure conveying</u>
-------------	-----------------	---------------------------------------
- c. Overhead Installation: NONE

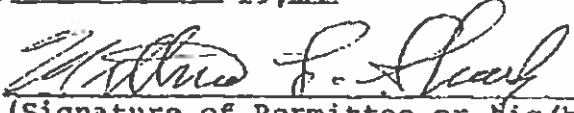
<u>Kind: Electric, Telephone, etc.</u>	<u>Description: No. of wire, cable, voltage, etc.</u>
--	---

d. (Approaches) and/or (Driveways)
Commercial _____ Residential 1 Width 18'

e. Estimated Work Starting date Sept. 1 1981

f. Estimated Work Completion date Oct. 15 1981

Stephen H. Bourne
(Name of Individual or Firm,
hereinafter called PERMITTEE)


(Signature of Permittee or his/her/th
authorized representative)

Box B
(Address)

Engineer, Agent for Stephen Bourne
(Title)

Zephyr Cove Nevada 89448
(City) (State) (Zip)

Telephone No. 588-3653

AFTER APPLICATION IS APPROVED, SEE SHEET 10 FOR ADDITIONAL CONDITIONS.

THIS PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS AND REGULATIONS:

1. For the purposes of this permit, the following definition of titles as used herein shall apply:
 - a. Department: The State of Nevada, acting by and through its Department of Transportation.
 - b. District Engineer: The senior officer of an Engineering District of the Department or his authorized representative in whose district the activities contemplated by this permit occur.
 - c. Permittee: The corporation(s), person(s), entity(ies) or their agents to whom this permit may be issued.
2. One of the following specific clauses, as checked by the Department, is applicable to this permit:

☐ (Applicable when the Permittee is a U.S. Government Agency.)

The United States or any agency thereof will assume any statutory liability for injury or damage to any person or property incident to, or that may arise during and in consequence of the use, occupancy, or enjoyment by the United States of the State's right-of-way in accordance with this permit.

☒ (Applicable when the Permittee is other than a U.S. Government Agency.)

The Permittee agrees to indemnify and save harmless the State of Nevada and its officers, agents, and employees against any and all liability, loss, damage, cost, and expense which it or they may incur, suffer, or be required to pay by reason of death, disease, or bodily injury to any person or persons, or injury to, destruction or loss of use of any property, including property belonging to the State of Nevada arising out of or incident to activities contemplated by this permit, and proximately caused, in whole or in part, by any act or omission of the Permittee or its contractors, agents, employees, or the employees of any one or all of them, or by the officers, agents, or employees of the State of Nevada, unless it is established by the Permittee that the proximate cause was the willful misconduct or gross negligence of such officers, agents, or employees of the State of Nevada.

3. It is understood that during the construction, rearrangement, relocation, reconstruction, maintenance, or removal of Permittee's facilities as outlined in this permit, the Permittee for himself his heirs, personal representatives, agents, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this permit for a purpose for which a Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the Permittee shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

The Permittee, for himself, his personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that (1) no person on the ground of race, color, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the ground of race, color, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the Permittee shall use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

That in the event of breach of any of the above nondiscrimination covenants, the State of Nevada shall have the right to terminate the permit and reenter and repossess said land and the facilities thereon and hold the same as if said permit had never been made or issued.

4. This permit is granted subject to all prior valid and existing permits, contracts, leases, liens, reservations, conditions, encumbrances, or claims of title which may affect the property covered by this permit.
5. All construction shall be in conformance with the requirements rules and regulations of the Nevada Public Service Commission, Nevada Industrial Commission, and the State Labor Commission, in addition to those particularly stipulated herein.

6. No work shall be initiated by the Permittee, agent, employee, or contractor upon or from the through traffic lanes or ramps of any highway except (1) when prior written permission is obtained from the Department; (2) when such work is authorized by this permit; or (3) in cases of extreme emergency which present an immediate danger to the safety and convenience of the public.

In the event of such an extreme emergency, the Department is to receive immediate notice from the Permittee, and under no circumstance will such an event constitute a waiver of any other provision of this permit.

7. This permit shall be accepted and signed by the Permittee within thirty (30) days of approval by the Department, or the permit may be revoked. The performance of ANY work contemplated by this permit shall constitute an acceptance by the Permittee of ALL the provisions and terms of this permit and ALL work shall be prosecuted diligently until completion. All work authorized by this permit shall be completed within six (6) months from the date of Permittee's acceptance, or this permit will be revoked; except upon written request, if warranted, the Permittee may be given an extension not to exceed 90 days.
8. The Permittee shall notify the District Engineer forty-eight (48) hours prior to commencing work.
9. All work performed under this permit shall be accomplished to the satisfaction of the District Engineer.
10. Any work incidental to the scope of this permit, but not specifically provided for herein, and which may affect public safety, shall be performed in such a manner as to insure a minimum of danger, delay, or inconvenience to the public, or as may be directed by the District Engineer.
11. The Permittee shall not cut, trim, mutilate, remove, or disturb in any manner, brush, shrubs, trees, or other flora now located within the Highway right-of-way, and/or Highway planting easement, or which hereafter may be planted or grown therein, except as approved or directed by the District Engineer.
12. During the construction operation, the Permittee shall cause to have installed and maintained as a protection to the public proper barricades, warning, and directional signs, flags, flares, or other protective devices. Flagmen on each side of the work area shall be provided as required during construction operations to slow and direct traffic around the work. Such safety measures shall conform with the provisions of "The Manual on Uniform Traffic Control Devices for Streets and Highways." (U.S. Department of Transportation, Washington, D.C.)

13. The Permittee shall insure that when installing aerial and underground electrical or communication lines, the clearances and method of construction shall be in accordance with the safety rules for the installation and maintenance of electrical supply and communication lines as set forth in the National Electrical Safety Code and the Nevada Department of Transportation Manual on the Accommodation and Installation of Utilities.
14. Except as may be required in paragraph 15 below, the Permittee shall not allow trenching or excavations within the limits of the right-of-way to remain open in any instance during the hours of darkness or on Saturdays, Sundays, or holidays. During such periods, trenching or excavations shall be either backfilled to surrounding grade or completely covered with steel plating or other suitable material. With the prior concurrence of the District Engineer that such measures are impracticable, the Permittee may instead erect sound and substantial fencing or barricades completely around the periphery of such trenching or excavations. The District Engineer may at any time direct the Permittee to take more stringent measures as circumstances dictate.
15. Except as may be required in paragraph 16 below, the Permittee shall not allow excavated material, equipment, and materials to remain upon the traveled way or roadway prism during the hours of darkness or on Saturdays, Sundays, and holidays. The Permittee shall be responsible to insure that all such equipment and materials are situated, after each work shift, no less than thirty feet (30') from the traveled way edge of pavement and no less than fifteen feet (15') outside the back face of the curb, whichever the case may be.
16. No work shall be performed by the Permittee on Saturdays, Sundays, or holidays without the prior written approval of the District Engineer and only under extreme emergency conditions and circumstances will any work be permitted during the hours of darkness.
17. The Permittee shall insure that when the installation of pipe or casing is to be accomplished by boring or jacking, it will be done in a manner that will not disturb the roadway surface. The Permittee's jacking and boring pit shall be located no closer than six (6) feet from the existing edge of oil and the top of pipe or casing shall not be less than thirty-six (36) inches to all points of roadway surface.
18. Construction grading shall be performed by the Permittee in such a manner that the roadway drainage ditch or any natural water course which feeds existing drainage facilities will not be blocked or the free flow hindered at any time. Should the necessity arise to accommodate drainage water, culvert pipe of the size and length and at the location prescribed by the District Engineer shall be installed by the Permittee.

19. The Permittee shall assure that any pavement to be displaced is cut and removed in neat and straight lines; trenching shall be performed in such a manner as to prevent breaking of pavement edge adjacent to trench. Paving shall be replaced by the Permittee true to line and grade and shall extend at least eighteen (18) inches on either side of trench. The paving mix and thickness of Permittee's mix shall be approved by the District Engineer and in no instance shall the depth be less than three (3) inches, or less than that of the existing asphaltic pavement.
20. Trenches shall be backfilled by the Permittee with granular backfill or other acceptable material to the elevation of the bottom of the existing base and surfacing (subgrade) as prescribed by the Nevada Department of Transportation Standard Specifications. Backfilling of the base area shall be made with Type 2 gravel or equivalent material. Permittee shall remove and dispose of all excess material immediately after backfilling.
21. Permittee shall replace all removed paving within two (2) days after completion of work and shall be responsible for maintaining the restored paved areas until such time as they are overlaid or reconstructed by the State. Failure by the Permittee to so perform may result in the Department's causing to be made necessary replacement and repairs, in which case, the Permittee shall be assessed the actual cost of such work.
22. Permittee shall rebuild or replace all fencing disturbed as a result of his work to as good or better condition as existed at the time this permit is issued. Cattle guards or other devices to restrain livestock shall be installed by the Permittee as directed by the Department.
23. When constructing asphalt approaches, the paving shall be placed by the Permittee a distance of at least twenty-five (25) feet from the edge of the existing pavement, or to the edge of the right-of-way if less than twenty-five (25) feet and shall be of a type and thickness approved by the District Engineer, unless indicated otherwise in the "Additional Conditions" section.
24. Drainage structures or any other permanent roadway related structures or devices placed within the limits of right-of-way of any State highway shall become the property of the State of Nevada. Any such structures shall meet Department standards and be approved by the District Engineer.
25. Except as hereinafter provided in paragraph (c) of this subsection, all installations of underground pipes and conduits in a highway right-of-way shall be marked and designated as follows:

- a. All New Installations of Underground Crossovers, except Service Laterals. Where no curbs exist, a 4"x4" timber or standard utility company marker shall be installed and maintained by Permittee outside the ditch line at locations satisfactory to the District Engineer. Such timber or marker shall extend thirty (30) inches above the roadway surface and have stenciled thereon the nature of the underground obstruction and the name or identifying symbol of the Permittee. Where curbs exist, the crossover shall be identified by description and name of owner stenciled on curb in black letters on white background in a compact and legible manner.
 - b. All New Longitudinal Installations. Where no curbs exist, 4"x4" timbers or standard utility markers shall be placed adjacent to the conduit or offset to such a distance as may be specified and at intervals not in excess of 1,000 feet, at each angle point, or where nonconcentric with the highway, at least every 300 feet. Where the encroachment is located in the traveled way, timber or other suitable markers shall be placed at an offset outside the ditch line at locations satisfactory to the District Engineer with an offset distance given. Where curbs exist, the information shall be visible and permanently marked or monumented on the curb near each intersection.
 - c. Exceptions. In incorporated cities where the installation is in accordance with ordinances, other regulations, or established practices, it will not be necessary to mark or designate said facilities as required above unless dictated by Federal directive. All installations covered under this section shall be placed or constructed in such a manner as not to constitute a hazard to the traveling public.
- 26. The Permittee shall immediately inform the District Engineer upon completion of work.
 - 27. The Permittee shall promptly make any and all necessary repairs to any facility erected or installed in the exercise of the privilege herein granted and shall at all times maintain said facility in good and safe condition.
 - 28. Any facility erected or installed in the exercise of the privilege granted remains subject to relocation or removal under the encroachment provisions of paragraphs 3 and 4 of Nevada Revised Statute 408.210.
 - 29. The Permittee, prior to making any changes from the approved plans and/or method, must obtain prior written approval from the District Engineer for said change. Should any such change

in the plan be approved, the Permittee shall, within thirty (30) days after the date of completion, submit "as built" drawings delineating the change.

30. A final inspection of the work accomplished by the Permittee shall be performed by the District Engineer to insure that the Permittee has complied with the terms of this permit. Periodic inspections by the District Engineer during the progress of work may be made to insure conformance to the Department's standards and those specified by this permit. For complex or extensive work under this permit, the Department may require a full-time inspector to observe the progress of work in its entirety. In such case, the Permittee agrees to compensate the Department for the wages, mileage, and per diem incurred by said inspector in connection with such inspection.
31. Permittee agrees that if the work contemplated by this permit has not been accomplished in conformity with the approved plans, or not pursued to completion in a manner consistent with good engineering practices or if circumstances dictate changes be made, the Department may (a) require the Permittee to adjust or reconstruct all or part of the project as the Department directs at no cost to the State of Nevada, or (b) cause the work to be done and assess the Permittee all costs attributable to such adjustment or reconstruction.
32. Permittee may not transfer, convey, or assign this permit, nor any privilege or responsibility contained herein pertaining to actual work to be accomplished within the right-of-way without prior written approval of the Department. Permittee will insure, however, that his continuing responsibility for the upkeep and repair of any facility erected or installed in connection with this permit will be transferred to his successors in interest or assigns, should this permit be approved.
33. A cultural resources survey must be performed, a report prepared and appropriate mitigating processes conducted as appropriate for all encroachments to be placed longitudinally within previously undisturbed portions of Department of Transportation right-of-way, and for lateral crossing or approaches requiring significant disruption of previously undisturbed portions of Department of Transportation right-of-way. Those installations requiring the cultural resources actions will be noted under the "Additional Conditions" section and more detailed requirements to be observed shall be appended to the permit.

ADDITIONAL CONDITIONS

Permit No. 2-166-81

1. All work within the highway right-of-way shall be in accordance with State of Nevada "Standard Specifications for Road and Bridge Construction," 1976 Edition, as amended.
2. All applicable safety regulations shall be observed in accordance with the "Manual on Uniform Traffic Control Devices."
3. Permittee must maintain at least one lane of traffic in each direction at all times.
4. All flagmen shall have a valid flagman's certification card in their possession when flagmen are required.
5. Intersections shall be constructed to conform to existing grades and cross slopes.
6. Approach shall be a "Type 5 Road Connection." (see detail attached)
7. Acceleration lane shall terminate at Station "0" 140+28+ and the deceleration lane shall begin at Station "0" 142+88+.
8. A saw cut one (1) foot into the existing travel lane between Station "0" 140+28+ and "0" 142+88+ to gain the proper thickness of the asphalt.
9. Approach shall be paved to a distance twenty-five (25) feet from the existing edge of oil or to the right-of-way, whichever is less.
10. Any highway appurtenances disturbed or destroyed, by reason of this permit, shall be returned to a condition equal to or greater than the original.

(continued on Sheet 11)

Under the authority of, and in accordance with the provisions of Chapter 408, Nevada Revised Statutes, and subject to all the terms, restrictions, and conditions contained herein, an occupancy permit is hereby granted to: Stephen H. Bourne, to perform the work described.

Dated at Carson City, Nevada, this 29 day of Sept, 19 81.

WITNESSED:

By C. R. Anderson
for Supervisory R/W Agent (Utilities)

STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION
By [Signature]
Dep. Director

WITNESSED:

By [Signature]

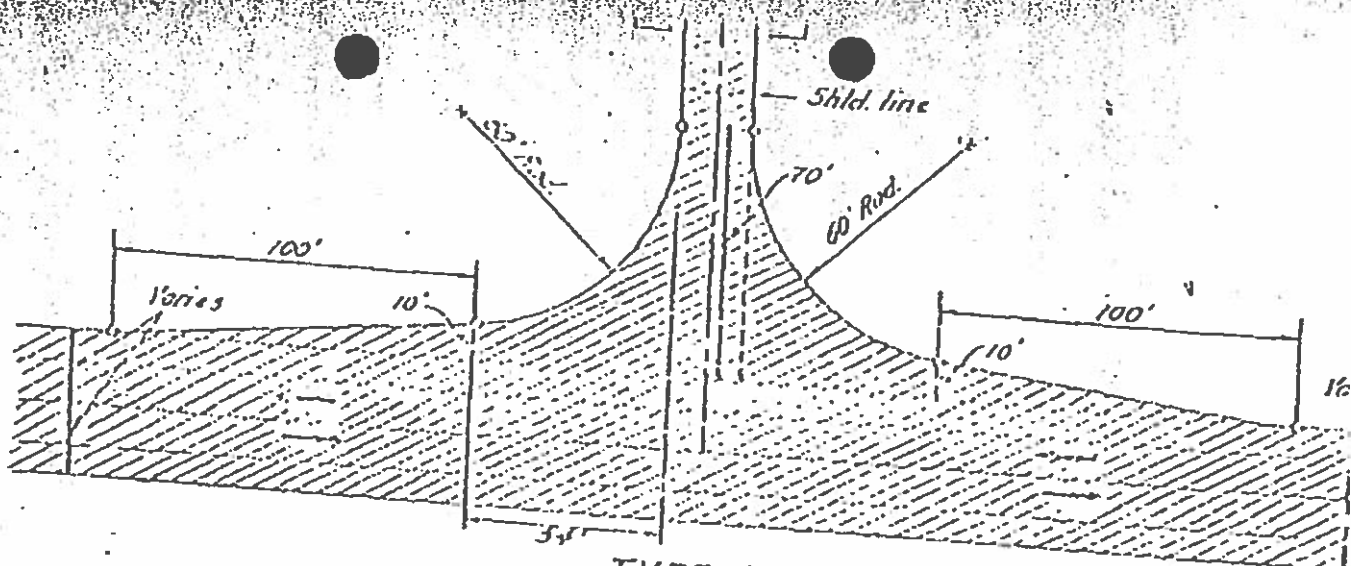
ACCEPTED 4-5, 1982
By [Signature]
(Permittee's Signature)

Agent for Stephen H. Bourne
(Title)

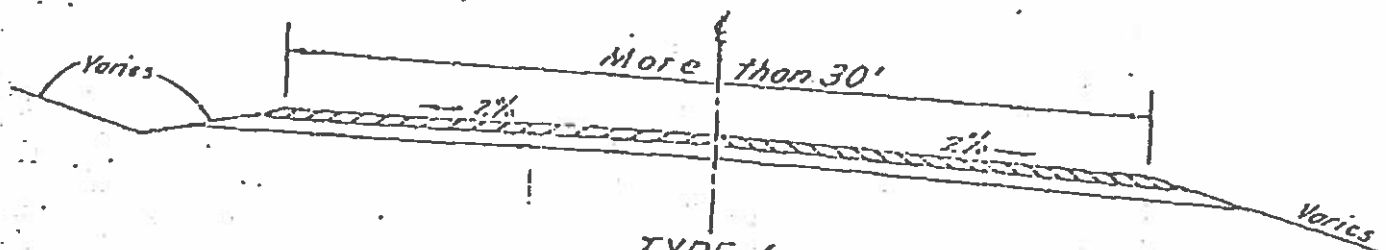
Permit No. 2-166-81

ADDITIONAL CONDITIONS (continued)

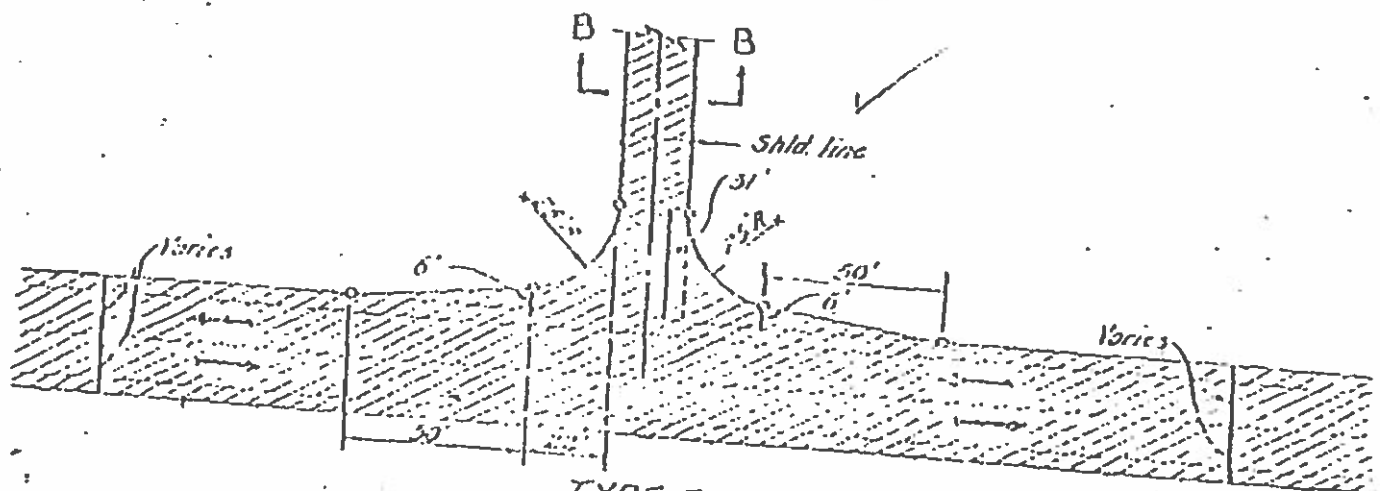
11. Permittee shall have written approval of the T.R.P.A. before beginning construction.
12. Permittee shall notify the District Engineer 48 hours prior to commencement of work and immediately upon completion at the direction of the District Engineer.



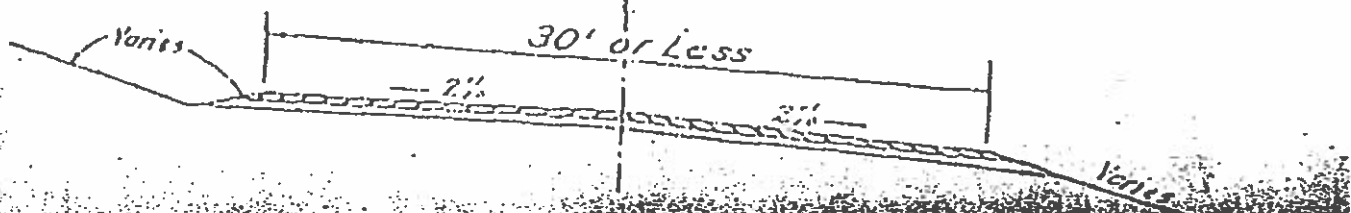
TYPE 4
TYPICAL PLAN



TYPE 4
SECTION A-A



TYPE 5
TYPICAL PLAN



SHARP, KRATER & ASSOCIATES, INC.3195 Mill Street
P. O. Box 11456
RENO, NEVADA 89510

(702) 329-6401

TO Nevada Transportation Department
1263 S. Stewart Street
Carson City, Nevada 89712**LETTER OF TRANSMITTAL**

DATE 4-5-82	JOB NO. 5680-01
ATTENTION Encroachment Permit Committee	
RE: EP # 2-166-81	

GENTLEMEN:

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via U.S. Mail the following items:

- ☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☒ Signed encroachment permit

COPIES	DATE	NO.	DESCRIPTION
1	4-5-82		Signed copy of EP #2-166-81

THESE ARE TRANSMITTED as checked below:

- ☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☒ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☒ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS This original permit was for work to be completed on
September 1, 1981 to October 15, 1981. The work is
now going to be completed concurrently with U.S. Hwy. 50
resurfacing, summer 1982.

COPY TO _____

SIGNED: 

John S. Monday, Planner

REVIEW AND RECOMMENDATION SHEET FOR
OCCUPANCY PERMIT APPLICATION

PERMIT NUMBER 160

Applicant Stephen H. Bourne

US-50-Do-2.69-2.75

2-766-81
2Date of Application Aug 10, 1981

(Milepost No.)

(Dist. No.)

DESCRIPTION AND LOCATION OF PROPOSED OCCUPANCY: Do-001
US-50 (South Shore Tahoe)

1. Up-grade the existing approach left of station "0" 141+58 to a type 5 or what is shown on the enclosed prints with longer tapers. The acceleration lane will terminate at station "0" 140+28± and the deceleration lane will begin at station "0" 142+88±.
2. Saw cut 1' into the existing travel lane between stations "0" 140+28± and "0" 142+88± to gain the proper thickness of the asphalt.
3. Mr. Bourne should have approval of the T.R.P.A. before beginning construction.
This should be written in the special conditions.

☒ Recommend Approval
☐ Do Not Recommend Approval
Date August 12, 1981
C. Boyd /for Ken Davis
 (Signature District Engineer)

Design Representative

☒ Recommend Approval
☐ Do Not Recommend Approval
Date 9/28, 1981
Paul R. Buehler /for Sam Suenye.
 (Signature)

 PROVIDING TRAFFIC CONTROL MEETS W/NDOT
 Traffic Representative APPROVAL.

☒ Recommend Approval
☐ Do Not Recommend Approval
Date 9-28, 1981
John J. Biale
 (Signature)

Structural Design Representative

☐ Recommend Approval
☐ Do Not Recommend Approval

Date _____, 19____

(Signature)

Archeological Section Representative

Date 9/28/81, 19____
☒ Recommend Approval
☐ Do Not Recommend Approval

W. H. H. H. H.
 (Signature)

Page 1

REVIEW AND RECOMMENDATION SHEET FOR
OCCUPANCY PERMIT APPLICATION

PERMIT NUMBER 2-166-81

Maintenance Representative

- ☒ Recommend Approval
☐ Do Not Recommend Approval

Date 9-29, 19 81

F. Coudis FOR John MOORE
(Signature)

For Chairman, Encroachment Committee

- ☒ Recommend Approval
☐ Do Not Recommend Approval

Date 9-29, 19 81

(Signature) [Signature]

- ☒ Permit Does Conform to utility policy
☐ Permit Does Not Conform to utility policy

Date 9-22, 19 81

[Signature]
Chief Right-of-Way Agent

Name of Applicant J. JOHN H. BAIRNE
 Date of Application Aug. 10, 1981
 Check List prepared by C. Condon

KATHLEEN
 Milepost No. 2.62 + 2.75
 Control Section No. _____
 Contract No. _____
 Location _____
 Project No. _____
 State Route No. _____

Check List for Revocable Permits

1. Is request properly set forth? ✓
 (The application must be typewritten or printed and signed in ink)
2. Are Utility plans clear? ✓
3. Do plans include: _____
 - a. Related highway alignment ✓
 - b. Project Identification ✓
 - c. Stationing ✓
 - d. Plan scale and date ✓
 - e. Location and length of existing facility ✓
 - f. Changes and/or new installation Changes
 - g. Existing and/or new highway right-of-way Existing
 - h. Is profile shown? ✓
 - i. Are street names shown? ✓
 - j. Is drawing color coded? ✓
 - k. Is right-of-way width shown? ✓
4. How is work to be done? _____
 - a. Utility forces _____
 - b. Contract ✓
5. If for aerial crossing:
 - a. Is profile drawing included? _____
 - b. Is type of material to be used shown? _____
6. If for gas line, is pressure given? _____
7. Is encasement required? (Gas and jet fuel lines must be vented) _____
8. Is this installation on Federal lands? NO
9. Is a cultural resources survey required? NO If so, is it attached? _____



A. E. STONE
Director

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

1263 SOUTH STEWART STREET
CARSON CITY, NEVADA 89712

April 2, 1982

TRANSPORTATION BOARD
ROBERT LIST, Governor, Chairman
RICHARD H. BRYAN, Attorney General
WILSON McGOWAN, State Controller

IN REPLY REFER TO

Sharp-Krater & Associates, Inc.
P. O. Box 11456
Reno, NV 89510

Attention: John Monday

Gentlemen:

As discussed with Mr. Red Laird, of our Design Division, enclosed are two (2) copies of Encroachment Permit No. 2-166-81 issued to Mr. Stephen H. Bourne for the upgrading of an approach at US-50-D0-2.69.

Please have the signature of acceptance affixed to page 10 of one (1) copy and return to:

Department of Transportation
State of Nevada
1263 S. Stewart Street
Carson City, NV 89712

Attention: Encroachment Committee

Sincerely,

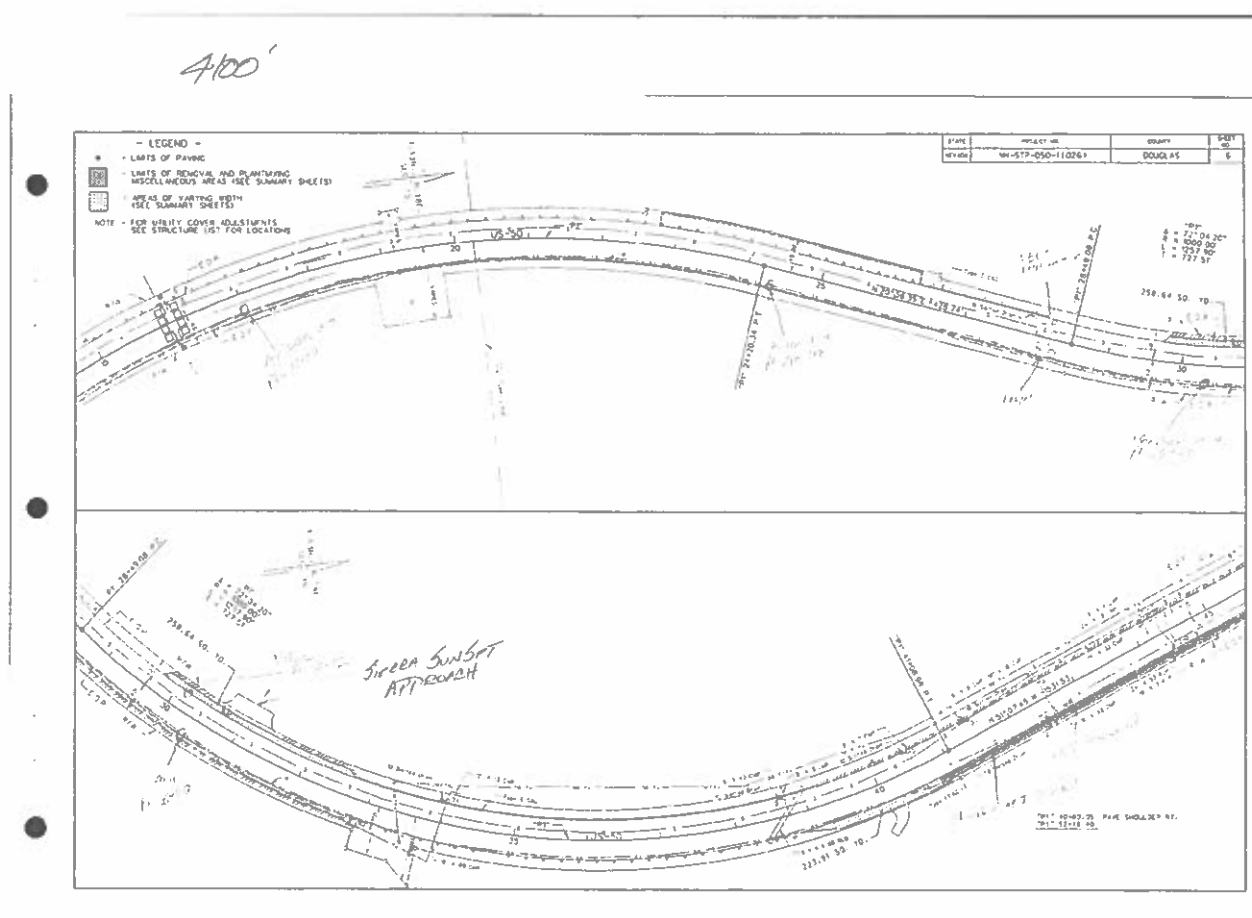
Clarence R. Andersen
Utility Inspector

CRA:rm
Enc.

Revocable Permits
Maps
Stored in Record Storage "

Appendix D

– 2014 Roadway Plan



DISTRICT
COPY

Appendix E

- 2014 Revocable Application and Permit for Occupancy of NDOT Right-of-Way



BRIAN SANDOVAL, Governor

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

District II
310 Galletti Way
Sparks, Nevada 89431
February 12, 2014

RUDY MALFABON, P.E., Director

Sierra Sunset, LLC
Attn: Ronald Alling
P.O. Box 3390
Lake Tahoe, NV 89449

RE: Permit No. 202264-14

Dear Permittee:

The Department has issued your permit with the additional conditions listed on pages two and three of the attached permit. A Copy of the "Terms and Conditions Relating to Right-of-Way Occupancy Permits" booklet regarding the general provisions and requirements is available upon request. It is the Permittee's responsibility to obtain any additional permits and/or approval from the other governmental agencies as may be required by Federal law, State law, or local ordinances.

You as the Permittee are required to comply with the terms and conditions listed in the booklet, as well as the additional conditions stated on the permit. A copy of the permit is required to be posted at the job site. Work will be suspended if the permit is not at the job site as required.

Please make a note that as of January 1, 2002 all Category 2 Traffic Control Devices used on NDOT roadways shall be National Cooperative Highway Research Program (NCHRP) Report 350 compliant. Non-compliance will result in the immediate closure of the project site.

If you have any questions or need additional information, contact the permit office at 834-8330.

Sincerely,

A handwritten signature in black ink, appearing to read "SRS", is written over the "Sincerely," text.

Steven R. Smith
Permit Coordinator

SRS/jaa

Enclosures

cc: Stewart Pratt
Inspector
District file
Read file

725

Fee: <u>\$50⁰⁰</u>	Permit No.: <u>202264</u>
Milepost: <u>45.50 DO 2.71/2.71</u>	District: <u>II</u>
System No.: <u>202264-14</u>	
Applicant: <u>Sierra Sunset LLC</u>	
Type of Work: <u>Legalize existing approach</u>	
FOR DEPARTMENT USE ONLY	

**REVOCABLE APPLICATION AND PERMIT FOR OCCUPANCY OF
NEVADA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY
(Under the provisions of NRS 408.423, 408.210 and NAC 408)**

1. Location where excavation, construction, installation and/or occupancy is proposed

Highway 50	550 Sierra Sunset Lane-Cross street: Highway 50
Local name of highway	Street address or nearest cross street

2. Describe in detail the type and scope of work; capacity or size of facility; stages and time frame for development; scheduled dates for start and completion. Attach 4 sets of detailed plans or drawings.
- Applicant requests that the NDOT permit identified as U.S. 50 DO 2.69 & 2.75, originally granted to Stephen Bourne in 1981, be legalized to reflect the current ownership of the property. Please find attached the Grant, Sale, and Bargain, Deed, recorded in Douglas County, Nevada on December 13, 2001 as Document No. 0530000, Book 1201, Page 4343-showing the transfer from Stephen H. Bourne and Nelgene H. Bourne, Trustees of the S.H. Bourne-1994 Trust u/l/d November 16, 1994 to Sierra Sunset, LLC, the current owner.

3. PERMITTEE hereby acknowledges that he has received and read a copy of the specific Terms and Conditions Relating to Right-of-Way Occupancy Permits issued by the State of Nevada Department of Transportation, and accepts said terms and conditions and any additional terms and conditions stated in this permit.

4. **SPECIFIC TERMS AND CONDITIONS APPURTENANT TO THIS PERMIT ARE LISTED ON PAGE 2.**

5. **THE PERMIT SHALL BE SIGNED AND RETURNED TO THE DISTRICT OFFICE.**

Ronald D. Alling, Manager, Sierra Sunset, LLC
Name of PERMITTEE (Type or Print)


Signature of PERMITTEE

Post Office Box 3390
Address

Manager 775-588-6676
Title Phone No.

Lake Tahoe, NV 89449
City, State, Zip

January 10, 2014
Date of Application

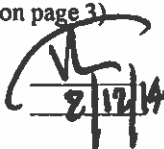
(775) 588-6676 (775) 588-4970
Phone No. Fax No.

1318-15-101-009
Permittee's I.D. No. or Parcel No.

ADDITIONAL TERMS AND CONDITIONS

1. All work performed under this permit and under routine and emergency maintenance will be in accordance with the current editions of the *State of Nevada, Terms and Conditions Relating to Right-of-Way Occupancy Permits*, the *State of Nevada, Standard Specifications for Road and Bridge Construction*, the *State of Nevada, Standard Plans for Road and Bridge Construction*, the National Electrical Safety Code, the American Association of State Highway and Transportation Officials (AASHTO) publications, "A Guide for Accommodating Utilities within Highway Right-of-Way" and "A policy on the Accommodations and Installation of Utilities on State and Federal-Aid Highways, within the State of Nevada" and will be accomplished to the satisfaction of the District Engineer. All construction will be in conformance with the requirements, rules, and regulations of the State of Nevada Public Utilities Commission, the State of Nevada Industrial Insurance System and the State of Nevada Labor Commission. NDOT's Standard Plans and Specifications are available for purchase at the District II Office.
2. On US-50 at HES "P1" 31+07 Lt. (DO 2.71 / 2.71), legalize existing residential approach. All work shall be in accordance with attached plans and NDOT Standards and Specifications. Any conflicts between the attached plans and NDOT Standards and Specifications shall be documented in writing and submitted to the Permit Office for acceptance. Written requests to deviate from NDOT Standards and Specifications must identify the standard, identify the proposed deviation, identify any proposed mitigation, suggest how proposed deviation and mitigation meets the intent of NDOT Standards and Specifications and suggest why the deviation is reasonable and safe. Deviation letters must be stamped by an engineer registered in the State of Nevada.
3. It shall be understood by the PERMITTEE that this approach may be reduced to a right-in/right-out only configuration. By commencing work under this permit, PERMITTEE agrees to accept this condition and also agrees to not hold the Department of Transportation responsible for any costs or damages that may result from this change. PERMITTEE shall have this encroachment permit recorded through the County Recorders Office. A conformed copy shall be returned to the Nevada Department of Transportation.
4. In the event the right-of-way encumbered by this permitted encroachment is needed for future highway purposes, PERMITTEE agrees to modify, adjust, remove, or relocate the encroachment authorized herein to accommodate the highway need at no cost to the Department.
5. PERMITTEE shall submit any improvements to existing approach within NDOT Right-of-Way to the permit office for review and approval prior to construction.
6. PERMITTEE agrees to indemnify, defend and save harmless the State of Nevada and its officers, agents, and employees against any and all liability, loss, damage, cost, and expense which it or they may incur, suffer, or be required to pay by reason of death, disease, or bodily injury to any person or persons, or injury to, destruction of, or loss of use of any property, including property belonging to the State of Nevada, arising out of or incident to activities contemplated by this permit, and proximately caused, in whole or in part, by any act or omission of the PERMITTEE, or its contractors, agents, or the employees of any one or all of them, or by the officers, agents, or employees of the State of Nevada, unless it is established by the PERMITTEE that the proximate cause was the willful misconduct or gross negligence of the officers, agents, or employees of the State of Nevada. Costs and expenses will include but are not limited to, the amount of the judgment, court costs, litigation expenses, expert witness fees, and reasonable attorney fees.

(Continued on page 3)

Initial
Date


2/17/14

PERMITTEE: Sierra Sunset, LLC

PERMIT NO. 202264-14

DISTRICT NO. 202264

(Continued from page 2)

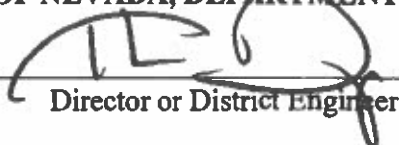
7. Advertising within the Right of-Way is restricted by law. It is the PERMITTEE's responsibility to understand and comply with all applicable local, state and federal requirements regarding advertising within the right of way.

This Right-of-Way Occupancy Permit is granted to the PERMITTEE in accordance with the provisions of Chapter 408 N.R.S. and subject to the TERMS AND CONDITIONS stipulated to perform the work described.

Dated this 12th day of February, 20 14

STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION

By

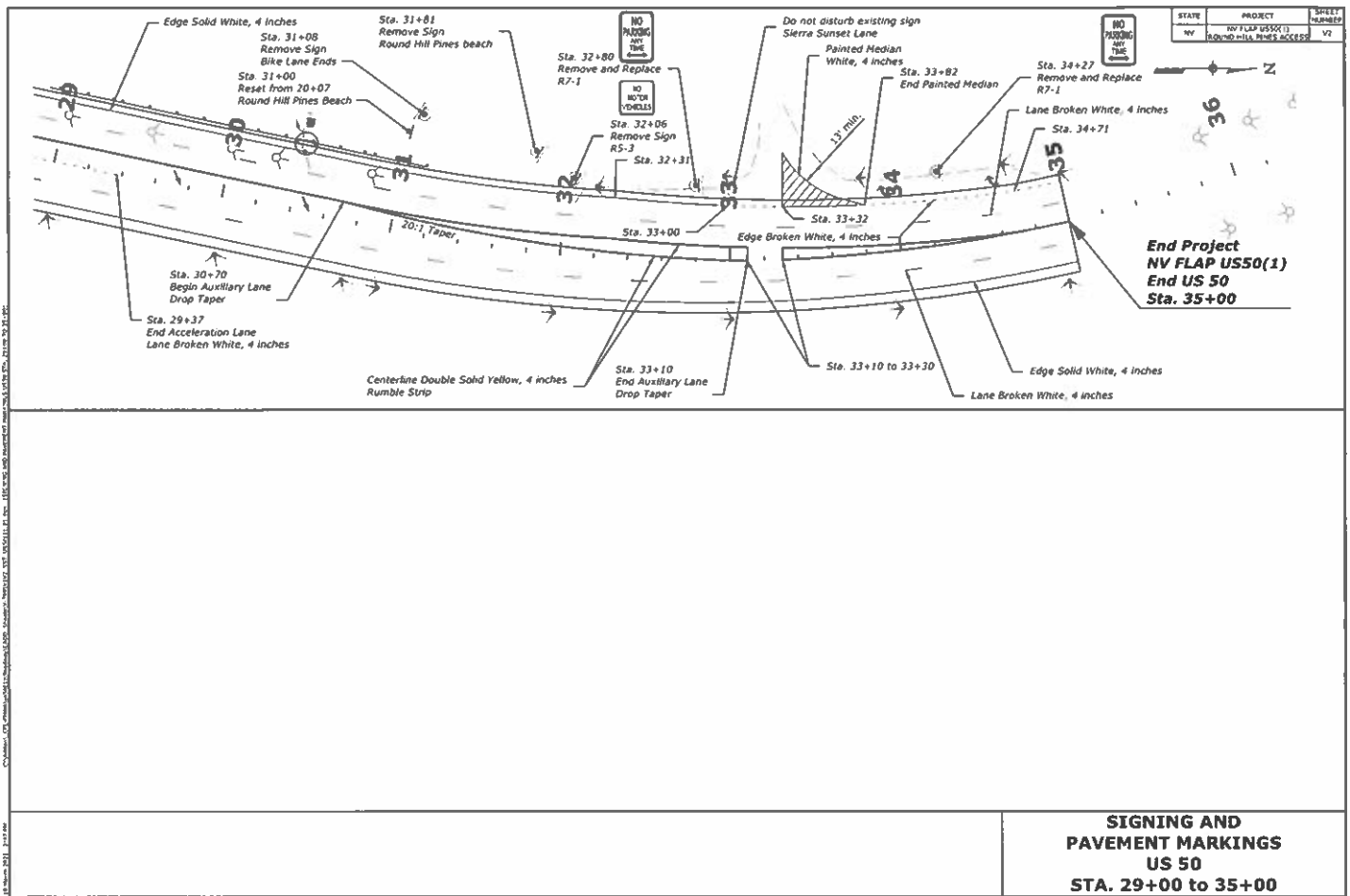

Director or District Engineer

Appendix F

- Sierra Sunset Lane Intersection Sight Distance Exhibit

Appendix G

- US 50 Signing and Pavement Markings plan sheet



**SIGNING AND
PAVEMENT MARKINGS
US 50
STA. 29+00 to 35+00**

Appendix H

- NDOT Terms and Conditions Relating to Right-of-Way Occupancy Permits



Terms and Conditions Relating to Right-of-Way Occupancy Permits

2015 Edition



Nevada Department of Transportation
1263 S. Stewart Street
Carson City, Nevada 89712
(775) 888-7000
www.nevadadot.com

Brian Sandoval
Governor

Rudy Malfabon, P.E.
Director

**TERMS AND CONDITIONS
RELATING TO
RIGHT-OF-WAY OCCUPANCY
PERMITS**



**STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION**

July 2015

**TERMS AND CONDITIONS
RELATING TO RIGHT-OF-WAY OCCUPANCY PERMITS**

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- X Application for Occupancy of NDOT Right-of-Way

I

DEFINITIONS

All Right-of-Way Occupancy Permits issued by the Department of Transportation to private or publicly-owned facilities, relating to approaches, intersections, poles, wires, cables, overhead structures, pipes, conduits, manholes, miscellaneous facilities, railroad crossings, and minor work is subject to all of the terms and conditions, except as otherwise specifically provided on page 2 of the permit.

For the purposes of this permit, the following definitions will apply:

1. AASHTO: American Association of State Highway and Transportation Officials
2. ADA: Americans with Disability Act
3. ADT: Average Daily Traffic
4. ANSI: American National Standards Institute
5. Backfill: The material to be placed in a trench from the bottom of the pipe to the bottom of type 2 base as per State Standards
6. BMPs: Best Management Practices
7. CFR: Code of Federal Regulations
8. CGP: Stormwater Construction General Permit
9. CWA: Clean Water Act
10. Clear Zone: The total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clear run-out area. The desired width is dependent upon the traffic volumes and speeds, and on the roadside geometry, in accordance with the AASHTO Roadside Design Guide
11. Control of Access: The condition where the right of owners or occupants of abutting land or other persons to access, light, air, or view in connection with a highway is fully or partially controlled by public authority
12. Department: The State of Nevada, Department of Transportation
13. District Engineer: The senior officer of an engineering district of the Department or an authorized representative in whose district the activities contemplated by the permit occur
14. EPA: Environmental Protection Agency
15. FEMA: Federal Emergency Management Agency
16. FHWA: Federal Highway Administration
17. Licensed Engineer: Means a person who by reason of his professional education and practical experience is granted a certificate of registration by the Nevada Board of Professional Engineers and Land Surveyors to practice professional engineering

18. MUTCD: Manual on Uniform Traffic Control Devices
19. NAC: Nevada Administrative Code
20. NCHRP 350 Compliance: National Cooperative Highway Research Program - A standard set by AASHTO and FHWA for the use of roadside hardware, including some work zone hardware
21. NDEP: Nevada Division of Environmental Protection
22. NDPES: National Pollutant Discharge Elimination System
19. NESC: National Electrical Safety Code
20. Noxious Weeds: Means any living stage, such as seeds and reproductive parts, of any parasitic or other plant of a kind, which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops, other useful plants, livestock or poultry or other interest of agriculture, including irrigation or navigation, or the fish or wildlife resources of the United States or the public health
21. NRS: Nevada Revised Statutes
22. Permit: Right-of-Way Occupancy Permit issued pursuant to the provisions of NRS 408.423, NRS 408.210 and NAC 408
23. Permittee: The corporation(s), person(s), entities(s), or their agent(s) to whom this permit may be issued
24. RCP: Reinforced Concrete Pipe
25. Roadway Prism: A general term denoting the cross sectional elements of a highway including the side slopes, structural section and depth of the base and surface, and roadside features such as curb, gutter, sidewalk and guardrail
26. Standard Plans for Road and Bridge Construction: Most recent editions of the Department Standard Plans, which incorporates the most recent revisions
27. Standard Specifications for Road and Bridge Construction: Most recent editions of the Department Standard Specifications, which incorporates the latest revisions and pull sheets
28. SWPPP: Stormwater Pollution Prevention Plan
29. Terms and Conditions: Standards for permit work

APPENDIX "A"

TRAFFIC IMPACT STUDY REQUIREMENTS

- A. Traffic studies are required by the Department to adequately assess the impact of a proposed development on the existing and/or planned highway system. The developer will have the primary responsibility for assessing the traffic impacts associated with a proposed development, with the Department serving in a review and approval capacity.
- B. The traffic study will be the responsibility of the applicant and must be prepared and sealed by a Nevada Licensed Engineer who has expertise in traffic studies and transportation planning. Upon receipt of a draft traffic study the NDOT Traffic Engineering Division will review the study data (sources, methods and findings) and will respond with written comments. The developer and engineer will then have an opportunity to incorporate necessary revisions prior to submitting a final report. The NDOT Traffic Engineering Division then must approve the final report before an application will be accepted.
- C. All previous traffic studies that are more than two (2) years old at the time that construction commences on the project will require updating. This may be waived if conditions have not significantly changed.
- D. Traffic studies will be required for the following:
 - 1. For commercial or residential subdivision developments that require direct access onto the Department's rights-of-way or highway system.
 - 2. For commercial or residential subdivision developments that, although not directly accessing the Department's rights-of-way or highway, will have significant impact to the traffic on an existing highway.
 - 3. If the usage of a previously permitted access point changes significantly, or if the conditions, which led to the traffic generation estimate, which was reported in a previous traffic study change significantly, a new traffic study will be required.
- E. Traffic Engineering consultants are encouraged to discuss large, complex projects with the Department's Traffic Engineering Division prior to commencing the study. Items that may be discussed are what the project entails, definition of the study area, directional distribution of traffic, intersections requiring critical lane analysis, and methods for estimating the build-out traffic volumes.
- F. Specific requirements for each traffic study will vary depending on site location and type of development. However, all traffic studies shall contain, at a minimum, the following information:
 - 1. Executive Summary
 - a. This will contain a brief project description and concise description of the study findings.
 - 2. Introduction
 - a. Site and Study Area Boundaries

Appendix I

- CFLHD Round Hill Pines Access Intersection
Design Memo



Memorandum

Subject: NV FLAP US50(1)
Round Hill Pines Access Intersection
Design

Date: 2/5/20

From: Thomas Sohn
Project Manager
Central Federal Lands Highway Division

To: Nevada Department of Transportation
Tahoe Regional Planning Agency
United States Forest Service

The purpose of this memo is to outline the process and procedures used to evaluate three proposed alternatives requested by the Tahoe Regional Planning Agency's (TRPA) Memorandum dated October 16, 2019.

Background

The existing entrance to the Round Hill Pines Resort from US 50 has safety concerns due to poor sight distance, lack of turn lanes, and acceleration/deceleration lanes. Poor sight distance is due to the existing intersection being located within a horizontal curve and a vertical crest just south of the intersection. Additionally, the existing entrance road has an inconsistent width that cannot allow for two-way traffic in certain locations, as well as sharp curves.

The existing conditions, information from the 2017 Nevada Federal Lands Access Program (NV FLAP) application, other supporting documents, and the project scoping process resulted in a Purpose and Need statement for the project (Appendix F). Central Federal Lands Highway Division (CFLHD) and the project partners determined that the purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from US 50. The purpose and need statement for the project was presented during a public meeting on April 23, 2019. Feedback received during the public meeting was positive and attendees were supportive of the project.

CFLHD and the project partners determined that the existing entrance into the Round Hill Pines Resort should be relocated to the north to a tangent section of US 50. This location provides better sight distance conditions and allows for construction of a new entrance road to tie into a future United States Forest Service (USFS) project that includes new parking lots at the resort. Additionally, the project team discussed safety improvements to US 50. These discussions included widening US 50 to accommodate a northbound left turn lane onto the proposed entrance road with a northbound acceleration lane for those turning left onto US 50 from the new entrance road and widening US 50 to accommodate a southbound right turn lane onto the proposed entrance

road and a southbound acceleration lane for those turning right onto US 50 from the new entrance road. The configuration for this layout and lane/taper values were taken from the NDOT Access Management System and Standards, Figure 4-10 (Appendix E).

For the 30% design phase, CFLHD provided plans, an estimate, and supporting documentation for the design described above; relocation of the existing entrance road and widening of US 50 at the intersection. At the 30% review meeting, the TRPA expressed concern about the widening and associated impacts. These concerns have been documented and elaborated on in comment response forms and during review meetings.

Based on this feedback, two additional alternatives were analyzed. A preliminary roundabout design and a traffic signal warrant analysis/design was conducted and presented to the project partners in July 2019. All three alternatives were presented during a public meeting on September 25, 2019. The roundabout and traffic signal alternatives were considered but dismissed from further evaluation because:

- Roundabout alternative had more environmental impact compared to the 30% design alternative.
- This intersection did not meet the traffic signal warrant.

In October 2019, in a memorandum prepared by TRPA (Appendix G), it was requested that additional alternatives be considered and analyzed. These alternatives are:

1. Moving the location of the entrance road to improve sight distance with no widening on US 50.
2. Moving the location of the entrance road to improve sight distance and only widening US 50 to include a northbound left turn lane onto the proposed entrance road with a northbound acceleration lane for those turning left onto US 50 from the new entrance road.

Intersection Sight Distance

The existing intersection was analyzed for left turn intersection sight distance. Based on existing conditions, the required sight distance is 588 ft. for passenger vehicles. For vehicles turning left onto US 50 from the existing entrance road, the existing sight distance to the north is approx. 760 ft., but only 310 ft. to the south (due to the location of a crest vertical curve). Therefore, the existing configuration has insufficient sight distance to the south and is an unsafe condition.

For the proposed design, the entrance road was relocated to the north within a tangent section of US 50. The exact location was selected such that intersection sight distance is maximized and evenly distributed. By moving the entrance road, an increased sight distance of approx. 665 ft. is achieved in both directions, which is sufficient for passenger cars. Because of the improved sight distance to a level that exceeds the minimum, the relocation of the entrance road is justified.

Displays showing the intersection sight distance are included in Appendix A.

Interactive Highway Safety Design Model Analysis

The Interactive Highway Safety Design Model (IHSDM) is a software analysis tool used to evaluate the safety and operational effects of geometric design decisions on highways. The software allows the user to import roadway geometry and assign attributes (such as lane widths, traffic data, turn lanes, etc.) for analysis. With this information, the software applies crash reduction factors (CRFs) and predicts total number and types of crashes for a specified time range.

For this analysis, three separate alternatives were analyzed: (1) moving the entrance road north with no widening on US 50, (2) moving the entrance road north and widening US 50 to include a left turn and acceleration lane, and (3) moving the entrance road north and widening US 50 to include a left turn and right turn lane as well as acceleration lanes in both directions (the 30% design). The results are available in Appendix B and summarized in the table below:

Table 1: IHSDM Results

Alternative	Crash Reduction by Crash Type (for years 2020-2036)			
	Total	Fatal/Injury	Property Damage Only	Located at Intersection
(1) Move Intersection ONLY ¹	-	-	-	-
(2) Add Left Turn/Accel ONLY	11.5%	14.1%	10.3%	33.0%
(3) 30% Design	14.8%	18.1%	13.2%	42.4%

¹ The “Move Intersection ONLY” alternative is considered the base alternative for this analysis. The crash reduction columns show the percent decrease in crash type from the base.

These results are based on the three alternatives, but with the following software limitations:

1. The software does not take intersection sight distance into account, therefore the existing condition is not any different than the “move intersection only” alternative in IHSDM. The previous section of this memo provides justification for moving the intersection despite the software not being able to account for improved sight distance. For the purposes of this analysis, the move intersection only alternative will be considered the base alternative.
2. There is not enough existing data available for acceleration lanes to apply a CRF, so the software does not account for acceleration lanes in its analysis. Research has shown that acceleration lanes at intersections function effectively and do not create safety problems, but there isn’t enough information to quantify what the expected safety impact would be. Alternatives (2) and (3) add one and two acceleration lanes, respectively. It is likely the actual number of crashes will be lower than the results presented in the IHSDM analysis due to the addition of acceleration lanes.
3. The software has an option to include a local calibration factor, as different designs can be more/less effective in different areas. There was not a local calibration factor available for this region.

Keeping the limitations described above in mind, the results from the software show a significant reduction in crashes by adding a left turn lane. This is supported by a 2017 publication by NDOT

(Appendix C), which shows, based on DOT state-wide reported crash data, the most common vehicle actions for fatal and serious injury crashes are going straight or turning left. Adding the left turn lane will help mitigate the safety issues of this intersection.

On the Federal Highway Administration Proven Safety Countermeasures website (Appendix D), it is shown that the benefit of left turn lanes is typically higher than for right turn lanes. This is supported by the IHSDM results, which show a significant reduction in crashes between alternatives (1) and (2), with a smaller reduction in crashes between alternative (2) and (3). Installing a right turn lane does have safety benefits, but they are less significant than those gained from adding a left turn lane.

In addition to safety, some other important factors for the proposed alternatives are summarized in the table below.

Table 2: Proposed Alternatives Comparison

Alternative	Length of Project on US 50 (ft)	US 50 Project Impervious Area (acre)	US 50 Pavement Width (ft)	Cost Estimate
(1) Move Intersection ONLY	N/A	3.0	56	\$2.2M - \$2.7M
(2) Add Left Turn/Accel ONLY	2210	3.5	72	\$3.7M - \$4.2M
(3) 30% Design	2420	4.8	84	\$4.8M

Alternative 3 would be a slightly longer project with more impervious area/impacts and a higher cost estimate due to the additional acceleration/deceleration lane.

Pavement Width

In the TRPA memo, it was also requested to restripe through lanes to 11 feet and reduce shoulder width to 2 feet. The AASHTO Green Book states in Section 7.3.3 that 12 foot lanes are desirable on high-speed, free-flowing, principal arterials such as US 50. Additionally, in Section 2.2.6 of the Green Book, when discussing driver expectancy, it is stated that design elements should be applied consistently throughout a highway segment and from one segment to another. Existing US 50 has 12 foot through lanes with an approximate 4 foot west shoulder and 6 foot east shoulder. Reducing the through lanes and shoulders for a relatively short stretch of the corridor would not provide consistency, would violate drivers' expectations, and would likely decrease the safety benefits presented above.

This is further supported by the Nevada DOT Design Manual (see excerpts in Appendix H). Section 3.6 of the manual states that through lanes and auxiliary lanes should be 12 feet wide. This does allow for a reduction of the median left turn bay/acceleration lane from 14 feet (as seen in the 30% design and used in the IHSDM analysis) to 12 feet. This would decrease the US 50 pavement width for Alternative 2, shown above in Table 2, to 70 feet. Additionally, Section 3.7 of the Nevada

DOT Design Manual states that on National Highway System (NHS) routes, which US 50 is, NDOT prefers a 4 foot inside shoulder and 8 foot outside shoulder. The current design incorporates both 4 and 6 foot outside shoulders, already below the preference of the department, to match existing conditions. The proposed design also matches the existing centerline in order to keep the solid double yellow striping on the roadway crown. Shifting the proposed centerline east to reduce the shoulder width from 6 feet to 4 feet (thus reducing overall impacts) was briefly discussed and quickly dismissed, as this would place the roadway crown within the wheel path, creating a new safety concern.

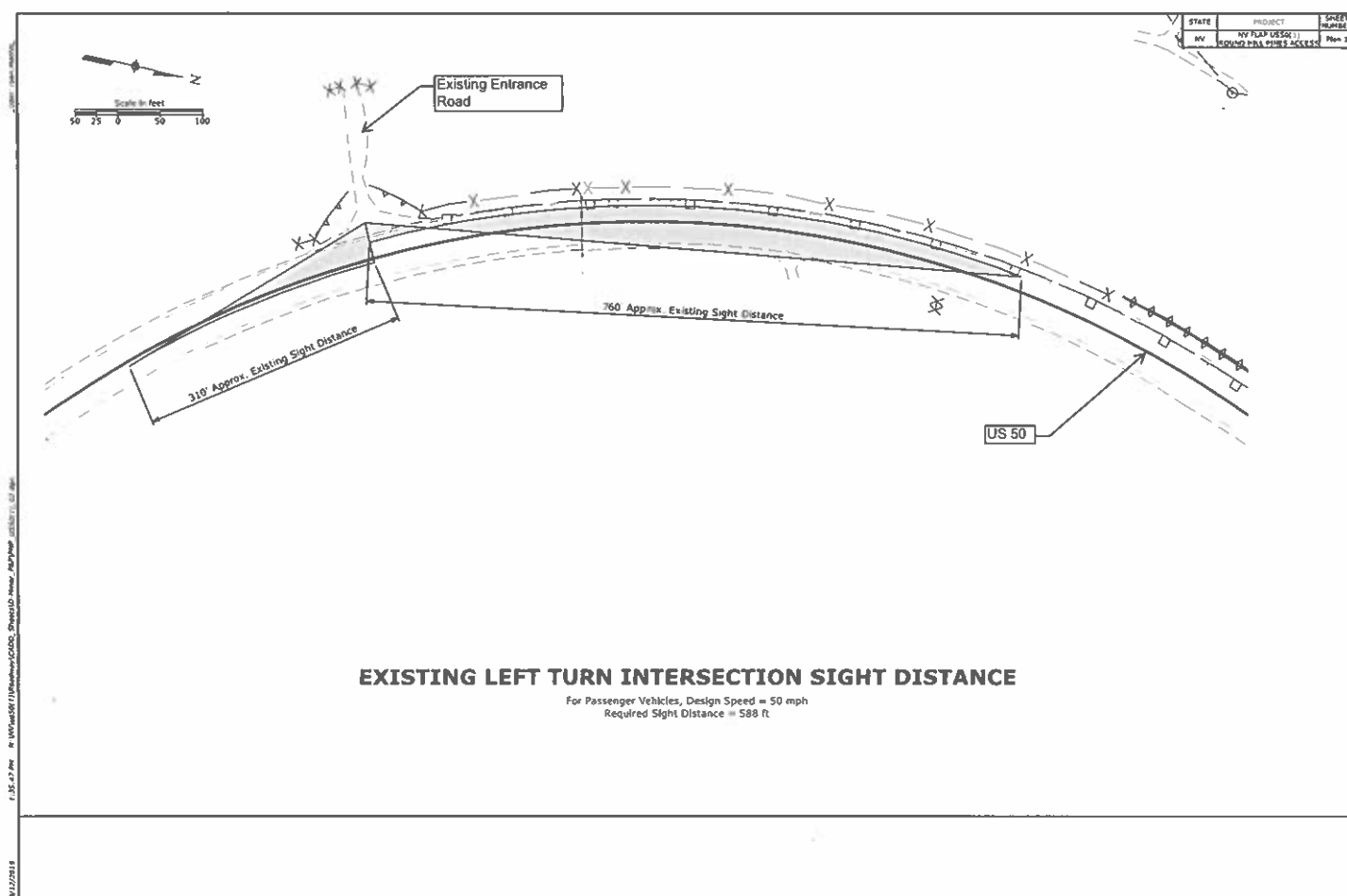
Conclusion

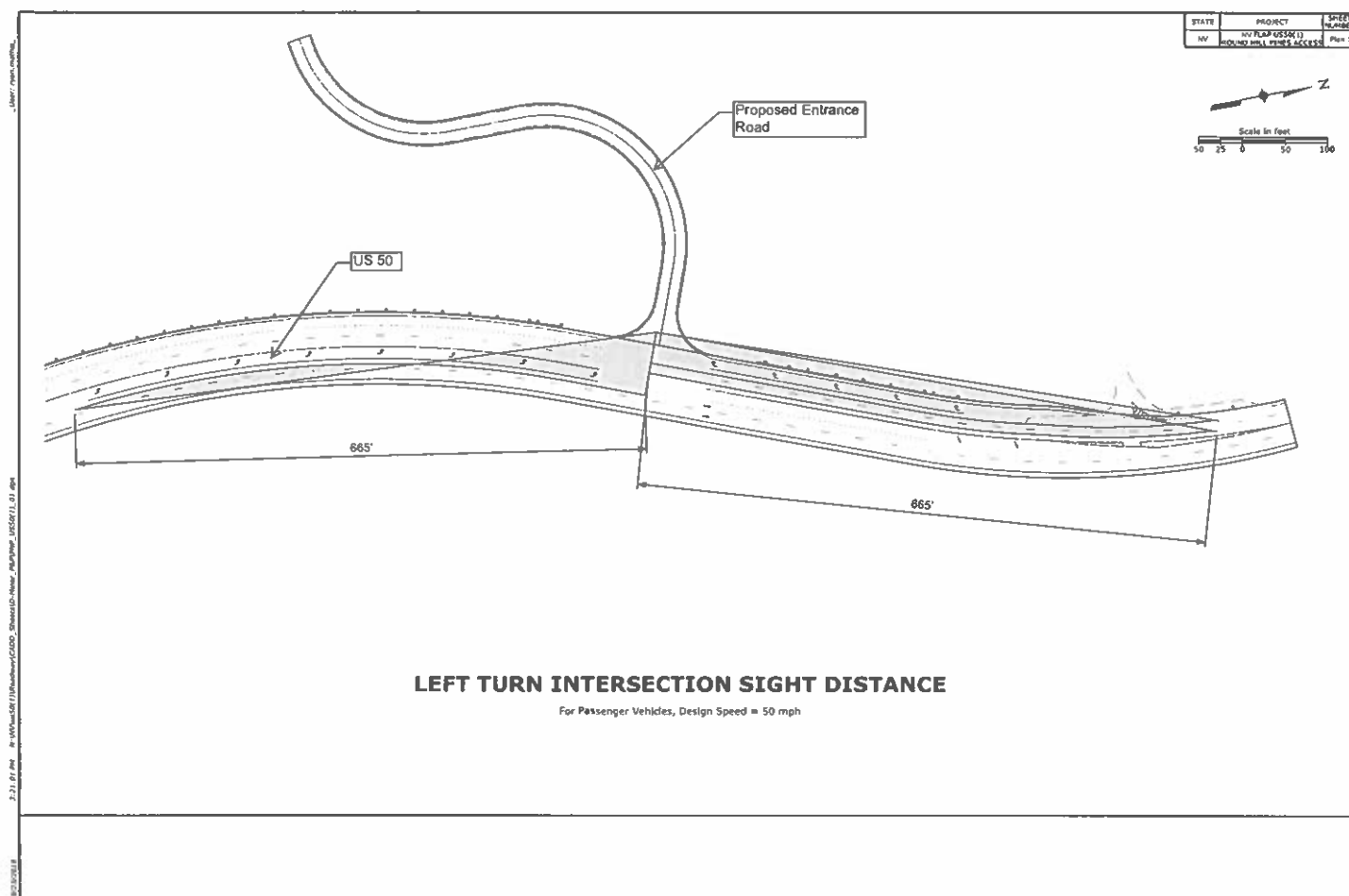
Moving the intersection to the north significantly improves sight distance from the existing condition and is justified. Additionally, the new entrance road improves access for cyclists, as the proposed road has less sharp turns, will provide a better surface to ride on, and a wider, consistent roadway (without precluding a future bike lane project on US 50). However, Alternative 1 (moving the intersection with no widening) is not recommended because it does not adequately address existing safety concerns, such as lack of left turn lane and left-turn acceleration lane. There are clear and significant safety benefits by providing additional turn lanes as proposed in Alternative 2. Therefore, it is CFLHD's opinion that safety benefits gained by improved sight distance alone are not significant enough to recommend Alternative 1.

While Alternative 3 (the design presented at 30%) shows the largest reduction in crashes by the IHSDM analysis, the safety improvements of adding the additional accel/decel lane from Alternative 2 are incremental and outweighed by other factors. Compared to Alternative 2, there are more project impacts due to a longer length of project, increased impervious area (and the associated pavement width), and wider construction limits (resulting in more tree removals). With the project located in a sensitive and scenic area, project partners have stressed the importance of minimizing project impacts with context sensitive design solutions. Additionally, it has been noted that while there are multiple locations of 5 lanes of pavement on US 50 within a few miles of the project area, there are no other locations of 6 lanes of pavement on US 50 near the project area. TRPA expressed their concern that the Alternative 3 design would be compromising the character of the corridor by adding a section with an extra lane of pavement wider than anywhere else.

CFLHD recommends Alternative 2 (relocation of the entrance road to the north and providing a northbound left turn lane and northbound acceleration lane along US 50) for this project going forward. It is also recommended that through lanes remain 12 feet wide, the median left turn bay/acceleration lane be reduced to 12 feet wide (from 14 feet), and the shoulders remain 4 feet (west) and 6 feet wide (east) to match existing widths. Through different analyses presented in this memo, this alternative provides significant safety benefits while maintaining the character of the existing US 50 corridor and reduced environmental impacts from the 30% design alternative.

Appendix A – Intersection Sight Distance Displays





Appendix B – IHSDM Results

Alt1 Predicted Highway Crash Rates and Frequencies Summary

First Year of Analysis	2020
Last Year of Analysis	2036
Evaluated Length (mi)	0.5166
Average Future Road AADT (vpd)	23,384
Predicted Crashes	
Total Crashes	94.52
Fatal and Injury Crashes	31.62
Property-Damage-Only Crashes	62.9
Percent of Total Predicted Crashes	
Percent Fatal and Injury Crashes (%)	33
Percent Property-Damage-Only Crashes (%)	67
Predicted Crash Rate	
Crash Rate (crashes/mi/yr)	10.7629
FI Crash Rate (crashes/mi/yr)	3.6006
PDO Crash Rate (crashes/mi/yr)	7.1623
Predicted Travel Crash Rate	
Total Travel (million veh-mi)	74.95
Travel Crash Rate (crashes/million veh-mi)	1.26
Travel FI Crash Rate (crashes/million veh-mi)	0.42
Travel PDO Crash Rate (crashes/million veh-mi)	0.84

Alt2 Predicted Highway Crash Rates and Frequencies Summary

First Year of Analysis	2020
Last Year of Analysis	2036
Evaluated Length (mi)	0.5166
Average Future Road AADT (vpd)	23,384
Predicted Crashes	
Total Crashes	83.62
Fatal and Injury Crashes	27.17
Property-Damage-Only Crashes	56.45
Percent of Total Predicted Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Predicted Crash Rate	
Crash Rate (crashes/mi/yr)	9.5225
FI Crash Rate (crashes/mi/yr)	3.0937
PDO Crash Rate (crashes/mi/yr)	6.4288
Predicted Travel Crash Rate	
Total Travel (million veh-mi)	74.95
Travel Crash Rate (crashes/million veh-mi)	1.12
Travel FI Crash Rate (crashes/million veh-mi)	0.36
Travel PDO Crash Rate (crashes/million veh-mi)	0.75

Alt3 Predicted Highway Crash Rates and Frequencies Summary

First Year of Analysis	2020
Last Year of Analysis	2036
Evaluated Length (mi)	0.5166
Average Future Road AADT (vpd)	23,384
Predicted Crashes	
Total Crashes	80.53
Fatal and Injury Crashes	25.9
Property-Damage-Only Crashes	54.62
Percent of Total Predicted Crashes	
Percent Fatal and Injury Crashes (%)	32
Percent Property-Damage-Only Crashes (%)	68
Predicted Crash Rate	
Crash Rate (crashes/mi/yr)	9.1699
FI Crash Rate (crashes/mi/yr)	2.9496
PDO Crash Rate (crashes/mi/yr)	6.2203
Predicted Travel Crash Rate	
Total Travel (million veh-mi)	74.95
Travel Crash Rate (crashes/million veh-mi)	1.07
Travel FI Crash Rate (crashes/million veh-mi)	0.35
Travel PDO Crash Rate (crashes/million veh-mi)	0.73

Alt 1 Predicted Crash Frequencies and Rates by Highway Segment/Intersection

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Crash Rate (crashes/mi/yr)	Predicted Travel Crash Rate (crashes/million veh-mi)	Predicted Intersection Travel Crash Rate (crashes/million veh)
1	10+00.000	12+55.363	0.0484	5.759	0.3387	0.0999	0.2389	7.004	0.82	
2	12+55.363	26+62.450	0.2665	31.731	1.8665	0.5502	1.3163	7.004	0.82	
3	26+62.450	30+80.498	0.0792	9.427	0.5545	0.1635	0.3911	7.004	0.82	
US_50 Access Road Alt1	27+66.620			33.009	1.9417	0.7934	1.1483			0.22
4	30+80.498	36+88.788	0.1152	13.717	0.8069	0.2378	0.5691	7.004	0.82	
5	36+88.788	37+27.459	0.0073	0.872	0.0513	0.0151	0.0362	7.004	0.82	
All Segments			0.5166	61.506	3.618	1.0665	2.5515	7.004	0.82	
All Intersections				33.009	1.9417	0.7934	1.1483			0.22
Total			0.5166	94.515	5.5597	1.8599	3.6998	10.7629		

Alt 2 Predicted Crash Frequencies and Rates by Highway Segment/Intersection

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Crash Rate (crashes/mi/yr)	Predicted Travel Crash Rate (crashes/million veh-mi)	Predicted Intersection Travel Crash Rate (crashes/million veh)
1	10+00.000	12+55.363	0.0484	5.759	0.3387	0.0999	0.2389	7.004	0.82	
2	12+55.363	20+66.620	0.1536	18.294	1.0761	0.3172	0.7589	7.004	0.82	
3	20+66.620	26+62.450	0.1128	13.436	0.7904	0.233	0.5574	7.004	0.82	
4	26+62.450	27+66.620	0.0197	2.349	0.1382	0.0407	0.0975	7.004	0.82	
US_50 Access Road Alt2	27+66.620			22.116	1.301	0.5316	0.7693			0.15
5	27+66.620	30+80.498	0.0594	7.078	0.4164	0.1227	0.2936	7.004	0.82	
6	30+80.498	36+88.788	0.1152	13.717	0.8069	0.2378	0.5691	7.004	0.82	
7	36+88.788	37+27.459	0.0073	0.872	0.0513	0.0151	0.0362	7.004	0.82	
All Segments			0.5166	61.506	3.618	1.0665	2.5515	7.004	0.82	
All Intersections				22.116	1.301	0.5316	0.7693			0.15
Total			0.5166	83.622	4.919	1.5981	3.3209	9.5225		

Alt 3 Predicted Crash Frequencies and Rates by Highway Segment/Intersection

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Crash Rate (crashes/mi/yr)	Predicted Travel Crash Rate (crashes/million veh-mi)	Predicted Intersection Travel Crash Rate (crashes/million veh)
1	10+00.000	12+55.363	0.0484	5.759	0.3387	0.0999	0.2389	7.004	0.82	
2	12+55.363	20+66.620	0.1536	18.294	1.0761	0.3172	0.7589	7.004	0.82	
3	20+66.620	26+62.450	0.1128	13.436	0.7904	0.233	0.5574	7.004	0.82	
4	26+62.450	27+66.620	0.0197	2.349	0.1382	0.0407	0.0975	7.004	0.82	
US_50 Access Road Alt3	27+66.620			19.02	1.1188	0.4572	0.6616			0.13
5	27+66.620	30+80.498	0.0594	7.078	0.4164	0.1227	0.2936	7.004	0.82	
6	30+80.498	36+88.788	0.1152	13.717	0.8069	0.2378	0.5691	7.004	0.82	
7	36+88.788	37+27.459	0.0073	0.872	0.0513	0.0151	0.0362	7.004	0.82	
All Segments			0.5166	61.506	3.618	1.0665	2.5515	7.004	0.82	
All Intersections				19.02	1.1188	0.4572	0.6616			0.13
Total			0.5166	80.526	4.7368	1.5237	3.2132	9.1699		

Appendix C – NDOT Intersections Fact Sheet

NEVADA

Strategic Highway Safety Plan

Zero
Fatalities

Drive Safe Nevada



Always Buckle Up



Don't Drive Impaired



Focus on the Road



Stop on Red



Be Pedestrian Safe



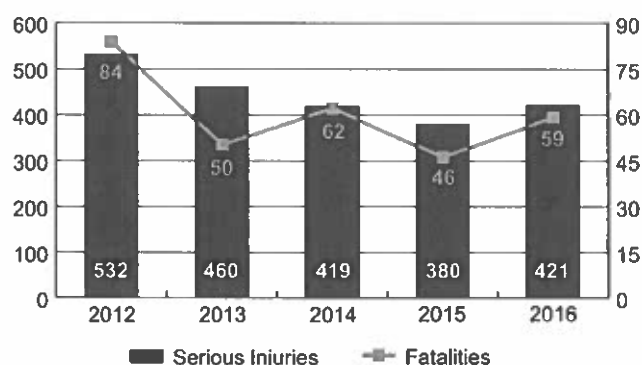
Ride Safe



NEVADA'S INTERSECTION SAFETY PROBLEM

Between 2012 and 2016, 301 people lost their lives and a staggering 2,212 were seriously injured in intersection-related crashes on Nevada roadways.

The goal of the Nevada Strategic Highway Safety Plan (SHSP) is to reach zero fatalities. This fact sheet provides information on who is involved in intersection-related fatal and serious injury crashes, where and when these crashes occurred, and why they happened. It also outlines how the State plans to reduce intersection-related fatalities and serious injuries.

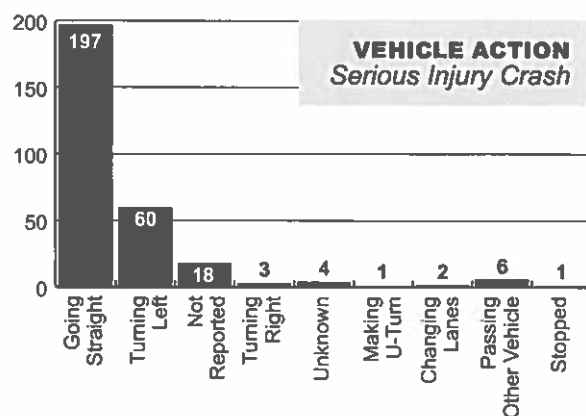
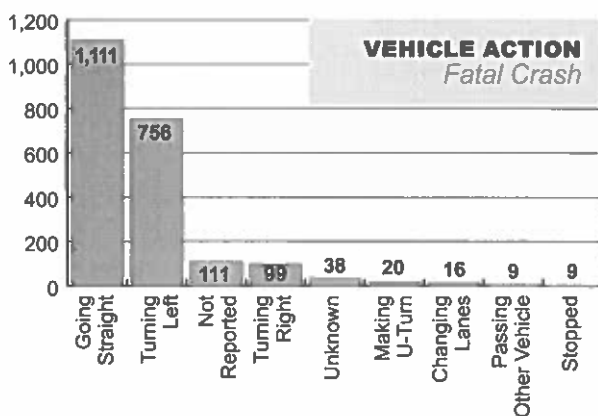
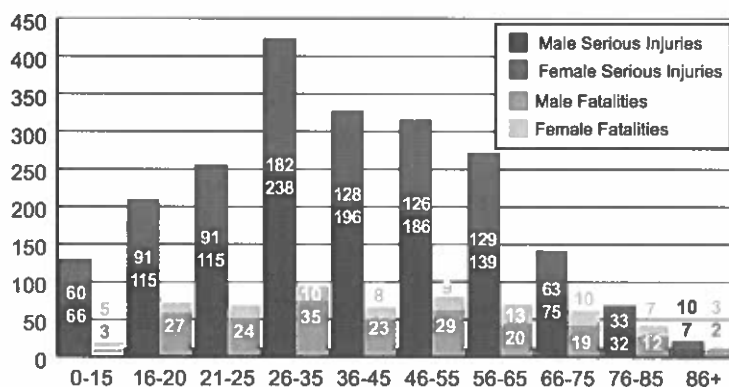


WHO?

Male drivers aged 26 to 35 years old are involved in most intersection-related fatalities and serious injuries.

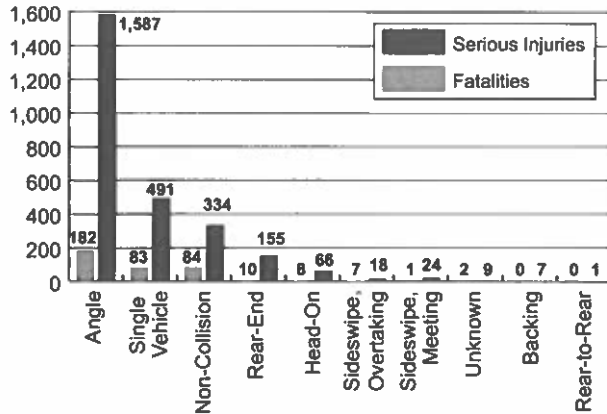
WHERE?

Between 2012 and 2016, three-quarters (75 percent) of the intersection-related fatalities and serious injuries occurred in Clark County.



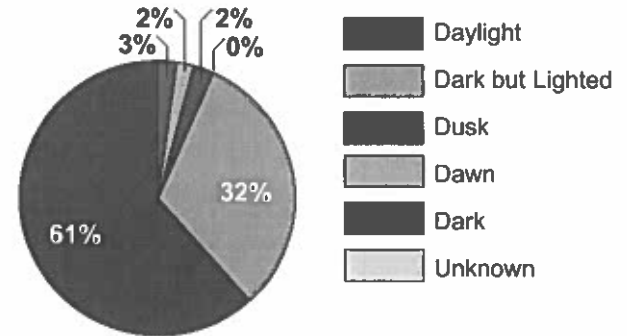
WHY?

Most of the intersection-related fatalities and serious injuries involve angle crashes followed by single vehicle crashes.



WHEN?

Most of the intersection-related fatalities and serious injuries occurred during daylight hours (61 percent) and 32 percent occurred in dark but lighted conditions.



HOW DO WE REACH OUR GOAL?

CRITICAL STRATEGIES TO REDUCE INTERSECTION FATALITIES

The Nevada SHSP identified several strategies that have the greatest potential to reduce intersection fatalities and serious injury crashes. By focusing on these strategies we can begin to reduce the terrible toll caused by intersection fatalities.

Implement geometric improvements:

- » Develop a systemic intersection safety improvement program.
- » Improve safety through design standard improvements.

Use appropriate traffic controls to reduce conflicts:

- » Use Intersection Control Evaluations (ICE) to determine appropriate traffic control at intersections.
- » Educate other NDOT and local agency employees of the benefits of roundabouts.
- » Install Flashing Yellow Arrows (FYAs) at traffic signals with protected permissive phasing.

Improve sight distance and traffic control visibility:

- » Install retroreflective backplates at traffic signals.

Improve access management to reduce conflicts:

- » Update NDOT Access Management Manual.
- » Implement access management guidelines at the state and local level.

Improve behavior at intersections through the use of education and enforcement:

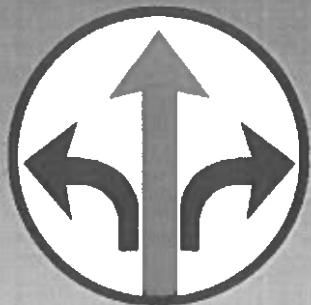
- » Educate the public on the benefits of roundabouts through a roundabout Public Relations (PR) campaign.

Appendix D – FHWA Proven Safety Countermeasures



U.S. Department of Transportation
Federal Highway Administration

PROVEN SAFETY COUNTERMEASURES



Left and Right Turn Lanes at Two-Way Stop-Controlled Intersections

SAFETY BENEFITS:

LEFT-TURN LANES

28-48%

Reduction in total crashes

RIGHT-TURN LANES

14-26%

Reduction in total crashes



Source: Highway Safety Manual

Auxiliary turn lanes—either for left turns or right turns—provide physical separation between turning traffic that is slowing or stopped and adjacent through traffic at approaches to intersections. Turn lanes can be designed to provide for deceleration prior to a turn, as well as for storage of vehicles that are stopped and waiting for the opportunity to complete a turn.



Example of left-turn lanes.

Source: FHWA

While turn lanes provide measurable safety and operational benefits at many types of intersections, they are particularly helpful at two-way stop-controlled intersections. Crashes occurring at these intersections are often related to turning maneuvers. Since the major route traffic is free flowing and typically travels at higher speeds, crashes that do occur are often severe. The main crash types include collisions of vehicles turning left across opposing through traffic and rear-end collisions of vehicles turning left or right with other vehicles following closely behind. Turn lanes reduce the potential for these types of crashes.

Installing left-turn lanes and/or right-turn lanes should be considered for the major road approaches for improving safety at both three- and four-leg intersections with two-way stop control on the minor road, where significant turning volumes exist, or where there is a history of turn-related crashes. Pedestrian and bicyclist safety and convenience should also be considered when adding turn lanes at an intersection.



Example of a right-turn lane.

Source: FHWA

→ For more information on this and other FHWA Proven Safety Countermeasures, please visit <https://safety.fhwa.dot.gov/provencountermeasures>.

FHWA-SA-17-053



<http://safety.fhwa.dot.gov>

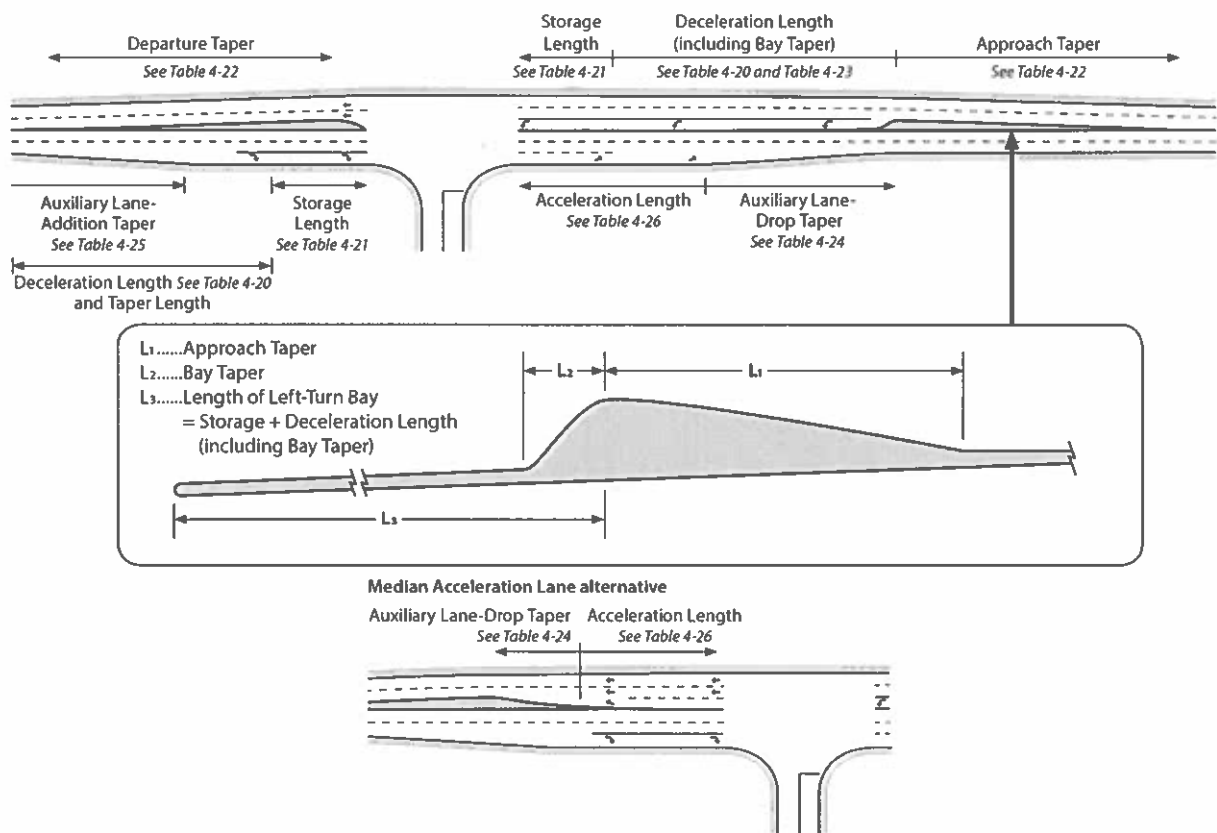
Appendix E – Elements of an Intersection

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Chapter Four: Design Standards and Specifications

Figure 4-10: Elements of an Intersection



Appendix F – Purpose and Need Statement

The purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50) in Douglas County, Nevada.

The project is needed because the current US 50 entrance configuration into the Round Hill Pines Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50. In addition to the current configuration, the Round Hill Pines Resort access road contains a narrow roadway width, steep grades, and sharp curves. This limits the flow for two-way traffic containing transit and recreational vehicles. The specific needs driving the project are discussed in further details below.

- The existing Resort access road is located at the crest of a vertical curve along US 50, which results in limited sight distance for both travel directions. Sight distance for passenger vehicles south of the existing Resort access road is below the recommended AASHTO sight distance values. This substandard sight distance measurement presents a safety hazard for vehicles exiting the Resort and turning north onto eastbound US 50, as well as eastbound US 50 traffic.
- During the peak season, eastbound US 50 experiences vehicle queuing and congestion in the inside lane. This is caused by Resort visitors making unprotected turning movements across westbound US 50 onto the access road.
- The existing access road is narrow with sharp turns and a steep grade, which limits two-way traffic and access for larger vehicles such as; recreation vehicles, transit, and trailers.

Objectives for the project includes the following:

- Align the Round Hill Pines Beach and Resort functions with the LTBMU's long term vision for the area.
- Improve alternate transportation options into RHPR such as bike, pedestrians, and transit.
- Minimize environmental and scenic quality impacts.
- Construct permanent water quality improvements to reduce sedimentation and runoff into the Lake Tahoe basin.

References:

NV FLAP application 2017 and supporting documentation

NDOT Roadside Safety Audit December 2016

NDOT Roadside Safety Audit October 2013

FHWA CFLHD, Scoping Report August 2018

FLAP Project Memorandum of Agreement July 2018

Appendix G – TRPA Memo



Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

MEMORANDUM

DATE: 10/16/19
TO: FHWA Central Federal Lands & Round Hill Pines Project Team
FROM: TRPA TMPO
RE: Round Hill Pines Intersection Design

Background:

The Round Hill Pines Access Project is an important project aimed at increasing the safety and improving accessibility for motorists, pedestrians, and bicycles entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US50) in Douglas County, Nevada. The Tahoe Regional Planning Agency (TRPA) has been working with the Federal Highway Administration – Central Federal Lands (FHWA-CFL), Nevada Department of Transportation (NDOT), and the US Forest Service (USFS) to identify improvements to the resort access for near term implementation. The current conceptual designs from the FHWA-CFL design team propose increasing the roadway width from 48-feet to 84-feet (including shoulders of 4-feet (west side) and 12-feet (east side), with additional impact outside of the roadway including tree removal, grading and scenic impacts. The conceptual designs follow NDOT freeway design standards for vehicle acceleration/deceleration, traveled way, median turn bays and shoulders which is out of character with this section of road which is mountain/forest and not a freeway.

The TRPA, as a project partner, has participated in project design meetings and provided comments on the alternatives analysis and conceptual designs. Previous TRPA comments and concerns have been expressed to the project team regarding consistency with TRPA policies. Some of those comments focused on the entrance design, which widens the roadway significantly and is out of character with the US 50 corridor in Douglas County, does not provide for safe bicycle access and does not include elements that slow vehicles down. The comments provided reflect the regulatory requirements of the TRPA, which is charged by the 1980 Bi-State Compact (P.L. 96-551) to achieve environmental thresholds to establish a balance between the natural environment and the human-made environment to preserve Lake Tahoe.

Specifically, The Bi-State Compact calls for the development of an integrated transportation plan addressing all modes of travel to “reduce dependency on the private automobile,” “reduce air pollution which is caused by motor vehicles,” and provide “public transportation and public programs and projects related to transportation.” The

previous issues raised by TRPA are supported by several adopted plans including the TRPA Regional Plan, the Regional Transportation Plan (RTP), the Lake Tahoe Safety Strategy, the Active Transportation Plan and the Corridor Connection Plan.

TRPA Regional Goals and Policies:

The TRPA Code of Ordinances relative to reducing environmental impacts and the Transportation policies within the Regional Plan substantiate our comments to avoid or minimize widening of the roadway, potential to reduce lane widths, the length of the acceleration and deceleration lanes, and speed limits; for incorporation of on-street bicycle facilities into project designs, and to preserve and link existing Tahoe Trail path segments to project improvements.

In order to permit a project TRPA must make findings that applicable Goals and Policies have been addressed. The following Goals and policies are an example of considerations for the project:

- TRPA Code Section 36.5.1: Existing natural features shall be retained including minimizing vegetation removal and maintaining natural slope of the project site.
- TRPA Code Section 66.1.3 & 66.1.4: Cannot implement a project that will negatively impact a scenic resource or viewpoint (both highway shoreline)
- TRPA Code Section 30.4.2.A.2 Linear Public Facilities and Public Health and Safety Facilities: Additions to linear public services (which includes a roadway) may be permitted so long as the application can show that there is no feasible alternative that will reduce the impacts to scenic resources, tree removal, additional coverage, grading, cut and fill slopes.
- TRPA Code Section 36.5.2.B: Design Standards for Public Service Projects shall include Active Transportation
- RTP Policy 1.8: strongly encourages traffic calming and noise reduction strategies when planning transportation improvements
- RTP Policy 2.14: calls for construction, upgrades and maintenance of pedestrian and bicycle facilities consistent with the active transportation plan
- RTP Policy 2.15: calls for accommodation of the needs of all categories of travelers by designing and operating roads for safe, comfortable, and efficient travel of roadway users of all ages and abilities such as pedestrians, bicyclists, transit riders, motorists, commercial vehicles, and emergency vehicles
- RTP Policy 2.18: calls for roadway improvements to construct, upgrade and maintain active transportation and transit facilities along major travel routes. In constrained locations, all design options should be considered, including but not limited to restriping, roadway realignment signalization and purchase of right of way

- RTP Policy 4.8: prohibits the construction of roadways to freeway design standards in the Tahoe Region
- RTP Policy 5.2: calls for multimodal access to recreation sites

The Safety Strategy calls for designated Class II (striped) or other specific space for bicyclists (such as bikeable shoulders) be installed on roadways to close gaps in the bicycle network. Further, the strategy seeks treatments for motor vehicles, such as reconfiguring roadways to reduce the number of through vehicle lanes, to increase safety at intersections. Data analysis conducted for the strategy identified the top two contributing factors to motor vehicle crashes within the study period were unsafe speed (31 percent of total) and improper turning (10 percent). Reducing roadway width, lane widths and posted speed limits, as well as incorporating HSIP-approved treatments, such as vehicle speed feedback signs and high friction pavement treatment, can also be used to emphasize the need to slow vehicle speeds, to increase driver awareness to roadway features and reduce crash risks.

The Active Transportation Plan identified the need for an on-street bicycle lane in the project area, designated the Round Hill intersection as a priority needing active transportation improvements, and calls for completion (and at a minimum, maintenance) of the regional shared-use path connecting around the lake (the Tahoe Trail). A possible location of this trail could utilize the existing NDOT right of way within this roadway segment (per TTD Stateline to Stateline Trail Feasibility Study, 2011).

The Corridor Connection Plan upholds these policies, strategy and plan by seeking to support transformational change through shifting a majority of trips in the basin to multimodal options; to manage congestion by improving access for all users by prioritizing safety for all users; to enrich the quality of life of residents and visitors through an enhanced multimodal transportation system; to improve the environment through reducing congestion, vehicle miles traveled, greenhouse gas emissions and roadway impacts to improve the clarity of Lake Tahoe; and to support economic vitality by supporting, among other things, recreation and tourism by efficiently moving people and goods.

Additionally, TRPA public engagement processes have consistently fielded requests from the public for increased safety for people walking, riding bicycles and driving in this area.

We share this information with you now to further clarify the origin and purpose of our submitted comments so that the project design meets the purpose and need of the project while also being consistent with TRPA environmental thresholds and the TRPA Regional Plan.

To those ends, we request a reevaluation of the existing acceleration/deceleration lane NEPA design option be evaluated in the NEPA and in the TRPA environmental document so that safety benefits and environmental impacts can be evaluated and commented upon by NDOT and TRPA.

- Evaluate the location of the existing Round Hill Pines approach to improve sight distance with no acceleration or decelerations lanes. This would include restriping through lanes to 11' to provide 2' shoulders.
- Evaluate relocating the existing approach to improve sight distance and include only a 12' wide left-in (storage lane) and left-out (acceleration lane) with 11' lanes and 2' shoulders.

We look forward to working with FHWA-CFL and NDOT in delivering this important project that satisfies the unique mobility, environmental, and safety concerns of the Lake Tahoe Basin.

Appendix H – Nevada DOT Road Design Guide Excerpts

SECTION 3 DESIGN ELEMENTS

Ramps: Direct and semi-direct ramps generally are designed with a high speed exit and a high speed entrance and are designed with Method 5. For ramps designed for speeds less than 45 mph, Method 2 can be used for the ramp proper. For loop ramps with a design speed less than 45 mph, use "Table 3-13," *2018 Green Book*, Page 3-54 for superelevation. Superelevation development at ramp entrances and exit terminals is shown in "9.6.4 Superelevation for Turning Roadways at Intersections", *2018 Green Book*, Page 9-83.

Axis of Rotation: For undivided highways, the axis of rotation for superelevation is usually the centerline of the traveled way. However, in special cases where curves are preceded by long, relatively level tangents, the plane of superelevation may be rotated about the inside edge of the pavement to improve perception of the curve.

For divided highways, if future widening is to the inside median, then rotate dual roadbeds in a single plane about centerline. When considering facilities for future widening to the outside shoulder, roadbeds should be rotated independently to reduce earthwork, and to reduce the length of the superelevation transitions. For example, the longer superelevation transitions can have an adverse impact to closely spaced ramps. ("Methods of Attaining Superelevation", *2018 Green Book*, Page 3-81)

The preferred axis of rotation for ramps is along the outside shoulder line in the direction of travel. It is occasionally placed along the inside shoulder line to better facilitate drainage or earthwork concerns. The axis of rotation for multi-lane ramps and direct connects is usually at centerline and one lane for number of lanes rotated. Appearance and drainage should always be taken into consideration in selection of the axis of rotation.

3.6 Lanes

Width: Traffic lanes intended for use by motor vehicles should be 12' wide with an additional 2' added when the lane is directly adjacent to a curb or other physical feature. A project intended to be used as "Complete Streets" may reduce lane width less than 12'. See *FHWA Road Diet Informational Guide* for more information on "Complete Streets".

To make bicycle travel safer on urban streets, the Department has agreed to stripe State owned and maintained roadways within Clark County using a marking standard established by the RTC of Southern Nevada as a guideline. The intent is to provide a shared outside travel lane of 14' for bicyclists by reducing our standard 12' travel lanes to 11'. Any lane next to a median barrier or curb will be a minimum 12' wide with a desirable width of 13'. On preservation projects, it will not always be possible to provide the desired lane configuration and judgment will have to be used to determine an acceptable compromise between lane widths and the desire to provide a 14' outside travel lane. The Principal Road Design Engineer shall review all compromises.

On reconstruction projects or new roadway projects, it is desirable to use a 15' outside travel lane width while maintaining 12' travel lanes. If this will cause the need for new right-of-way or significantly increase the size of takes, then the RTC standard may be used as described in the paragraph above. If Federal funds are involved, then any planned bicycle facility must be accommodated.

Minimum Acceleration and Deceleration Lengths for Entrance and Exit Terminals: See "Table 10-4. Minimum Acceleration Lanes Lengths for Entrance Terminals with Flat Grades of Less Than 3 Percent", *2018 Green Book*, Page 10-132 and "Table 10-6. Minimum Deceleration Lane Lengths for Exit Terminals with Flat Grades of Less Than 3 Percent", *2018 Green Book*, Page 10-138 for information on determining minimum lengths on entrance and exit terminals.

Auxiliary Lanes: Auxiliary lanes are defined as the portion of the roadway adjoining the traveled way for speed change, turning, and storage for turning, weaving, truck climbing, and other purposes supplementary to through traffic movements. The width of an auxiliary lane should be equal to the through lanes (12' preferred). An auxiliary lane may be provided to comply with the concept of lane balance, with capacity needs, or to accommodate speed changes, weaving and maneuvering of entering and exiting traffic. Where auxiliary lanes are provided next to freeway mainline lanes, the adjacent shoulder should desirably be 8'-12' in width, with a minimum 6' wide shoulder. ("10.9.5.10 Auxiliary Lanes," *2018 Green Book*, Page 10-90)

Lane Balance: To provide efficient traffic operation through and beyond an interchange, there shall be a balance in the number of lanes on the freeway and ramps. The basic number of lanes should be established for a substantial length of freeway and should not be changed through pairs of interchanges; variations in traffic demand should be accommodated by means of auxiliary lanes where needed.

SECTION 3 DESIGN ELEMENTS

At a freeway entrance, the number of lanes beyond the entrance should not be less than the sum of the merging roadway lanes and the freeway minus one but may be equal to the sum of all traffic lanes on the merging roadway. At a freeway exit, the number of approach lanes before the exit should be equal to the number of the lanes on the freeway beyond the exit, plus the number of lanes on the exit, minus one.

Exceptions to these principles occur at cloverleaf loop ramp exits that follow a loop-ramp entrance and at exits between closely spaced interchanges. The traveled way on the freeway should not be reduced by more than one traffic lane at a time. Examples of proper lane balance can be seen in "10.9.5.9 Coordination of Lane Balance and Basic Number of Lanes," *2018 Green Book*, Page 10-87.

Lane Tapers: For freeway lane tapers, see "Figure 10-72. Typical Single-Lane Entrance Ramps," *2018 Green Book*, Page 10-129. Refer to the *Access Management System and Standards, current version* for lane tapers other than freeways.

Ramps: The desirable single lane ramp width is 24' (Striped 4'-12'-8'). On 3R projects, substandard ramp widths should be addressed during the Preliminary Design Field Study (PDFS) where it is economically feasible to widen them to meet current standards. See Section 2.1 for shoulder width criteria.

Bike lanes: Bike lanes are used when it is desirable to delineate a portion of the pavement for preferential use by bicyclists or to provide for more predictable vehicle movements. Bike lanes are delineated with signs and pavement markings. They should be one-way facilities located within the limits of the paved shoulder. The minimum width of a bike lane is 4'. In areas with raised curb or longitudinal barriers, the minimum width is 5'. The open graded plantmix surface wearing course is to be paved flush with the lip of the gutter pan and inlet grates. A width of 5' or greater is preferred where substantial truck traffic is present, or where motor vehicle speeds exceed 50 mph.

On highways without full control of access where a bridge deck is being replaced or rehabilitated, and where bicycles are permitted to operate at each end, the bridge should be reconstructed so that bicycles can be safely accommodated when it can be done at a reasonable cost. Consultation with local groups of organized bicyclists is encouraged in the development of projects with bicycle facilities.

In situations where the lateral offset of an existing longitudinal traffic barrier from the shoulder stripe is less than 5' then, in consideration of bicycle traffic, the placement of a rumble strip must be justified by an engineering study. The study should consider: [a] the consequences of omitting the rumble strip adjacent to the traffic barrier, and [b] adjusting the lateral offset of the traffic barrier to at least 5'. On new roads or new traffic barrier installations on existing roads, the minimum distance from the shoulder line to the face of the traffic barrier is 6' if the road also serves as a bikeway.

Additional resources: For further guidance refer to AASHTO's Guide for Development of Bicycle Facilities. Information is requested through Transportation/Multimodal Planning for bicycle facilities, bus lanes and turnouts.

3.7 Shoulders

Interstate: An adopted criterion for Interstate highways specifies the paved width of the right shoulder shall not be less than 10'. Where truck traffic exceeds 250 DDHV a 12' right shoulder should be considered. On freeways with six or more lanes the usable paved width of the median shoulder should also be 10' and preferably 12' where the truck traffic exceeds 250 DDHV. On four-lane freeways, the left shoulder is normally 4' to 8' wide, at least 4' of which should be paved, and the remainder stabilized. ("8.2.4 Traveled Way and Shoulders", *2018 Green Book*, Pages 8-3 and 8-4) The Department prefers a 4' inside shoulder and 8' outside shoulders on NHS routes and 2' inside shoulders and 4' outside shoulder minimum on State Routes. In the event these widths cannot be achieved, coordinate with the Principal Road Design Engineer.

Drainage: Consult with the Hydraulic Division if shoulder widths adjacent to barrier rail or curb and gutter are proposed to be reduced as this may affect onsite drainage design criteria.

Appendix C

Public Notice Comments on the Environmental Assessment

From: Mathis, Ryan (FHWA)
To: Edgar, Lindsay (FHWA)
Subject: FW: Requesting physical copy of EA
Date: Monday, June 28, 2021 1:15:03 PM

FYI – in case you need this as well.

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Andrew Hickman <andrew@rhgid.org>
Sent: Wednesday, June 9, 2021 8:14 AM
To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>
Subject: RE: Requesting physical copy of EA

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

I received my paper copy of the EA.
Thank you.

From: Mathis, Ryan (FHWA) [<mailto:ryan.mathis@dot.gov>]
Sent: Friday, May 28, 2021 10:06 AM
To: Andrew Hickman
Subject: RE: Requesting physical copy of EA

Thanks for reaching out Andrew. We will send you a physical copy of the EA sometime next week. I'll follow up with an email letting you know when we got it in the mail.

Thanks,

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Andrew Hickman [<mailto:andrew@rhgid.org>]
Sent: Friday, May 28, 2021 9:14 AM
To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>
Subject: Requesting physical copy of EA

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Ryan,

I would like a physical copy of the EA for the Round Hill Pines Access Project, if possible.

Thank you,

Andrew Hickman

District Manager

Round Hill GID

PO Box 976 (mailing)

343 Ute Way (physical)

Zephyr Cove, NV 89448

andrew@rhgid.org

(775) 588-2571 office

(775) 790-3623 cell

From: Mathis, Ryan (FHWA)
To: Edgar, Lindsay (FHWA)
Subject: FW: round hill pines project South Lake Tahoe
Date: Monday, June 7, 2021 11:26:04 AM

Passing along this comment I received on Round Hill Pines.

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Barbara [mailto:barbarasourikoff@gmail.com]

Sent: Friday, June 4, 2021 12:18 PM

To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>

Subject: round hill pines project South Lake Tahoe

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

The proposed new entrance and exit to the resort does is not well planned. The spot is on a blind turn in the road. I have attended public info meetings on this in the past and it seems project managers are from out of state and ill informed on this project and traffic concerns on this portion of hwy 50.

Thank you

Barbara Sourikoff

Sent from [Mail](#) for Windows 10

Nevada State Clearinghouse Comments Received for E2021-287 E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County - Douglas

Comment # 1

From: Sue Gaskill

Agency: Nevada Division of Water Resources

Title:

Phone: 775-684-2804

Email: sgaskill@water.nv.gov

Date Received: 06/24/2021

Attached please find a copy of the comments for this project from the Nevada Division of Water Resources.

Scott Carey

From: NevadaClearinghouse
To: Sue Gaskill
Subject: RE: Nevada State Clearinghouse Notice E2021-287 (E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County)

From: Sue Gaskill <sgaskill@water.nv.gov>
Sent: Wednesday, June 2, 2021 7:53 AM
To: Amanda Brownlee <abrownlee@water.nv.gov>; NevadaClearinghouse <NevadaClearinghouse@lands.nv.gov>
Cc: Michelle Barnes <mlbarnes@water.nv.gov>; Thomas Pyeatte <tpyeatte@water.nv.gov>
Subject: RE: Nevada State Clearinghouse Notice E2021-287 (E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County)



NEVADA STATE CLEARINGHOUSE

Department of Conservation and Natural Resources, Division of State Lands
901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
(775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 05/27/2021

U.S. Federal Highway Administration

Nevada State Clearinghouse Notice E2021-287

Project: E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County

The Federal Highway Administration (FHWA) has announced the availability for public review and comment the Environmental Assessment (EA) for the Round Hill Pines Access Project. FHWA, in cooperation with the U.S Forest Service Lake Tahoe Basin Management Unit (LTBMU), Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), proposes to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50). For additional information or to view project documents please visit <https://highways.dot.gov/federal-lands/projects/nv/round-hill-pines>. Comments due to the Clearinghouse on June 25, 2021.

Follow the link below to find information concerning the above-mentioned project for your review and comment.

E2021-287 - <http://clearinghouse.nv.gov/public/Notice/2021/E2021-287.pdf>

- Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.
- Please reply directly from this e-mail and attach your comments.
- Please submit your comments no later than Friday June 25th, 2021.

Clearinghouse project archive

Questions? Scott Carey, Program Manager, (775) 684-2723 or nevadaclearinghouse@state.nv.us

☐ No comment on this project ☐ Proposal supported as written

AGENCY COMMENTS:

Nevada State Clearinghouse

Department of Conservation and Natural Resources

901 South Stewart Street, Suite 5003

Carson City, NV 89701

775-684-2723

<http://clearinghouse.nv.gov>

www.lands.nv.gov

DATE: June 1, 2021

Division of Water Resources

Nevada SAI # E2021-287

Project: E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County

☐ No comment on this project ☒ Proposal supported as written

AGENCY COMMENTS:

NRS – Nevada Revised Statutes

NAC – Nevada Administrative Code

General:

Compliance with Nevada water law is required.

All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of NRS Chapters 533 and 534 and not otherwise.

Water shall not be used from any source unless the use of that water is authorized through a permit issued by the State Engineer. For underground sources, certain uses of water may be authorized through the issuance of a waiver pursuant to NRS Chapter 534 and NAC Chapter 534.

Nevada State Clearinghouse Comments Received for E2021-287 E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County - Douglas

Comment # 2

From: Jim Balderson

Agency:

Title:

Phone:

Email: JBALDERSON@ndep.nv.gov

Date Received: 06/24/2021

Attached please find a copy of the comments on this project from the Nevada Division of Environmental Protection, Bureau of Safe Drinking Water.

Scott Carey

From: NevadaClearinghouse
To: Jim Balderson
Subject: RE: Nevada State Clearinghouse Notice E2021-287 (E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County)

From: Jim Balderson <JBALDERSON@ndep.nv.gov>
Sent: Friday, June 4, 2021 1:36 PM
To: NevadaClearinghouse <NevadaClearinghouse@lands.nv.gov>
Subject: RE: Nevada State Clearinghouse Notice E2021-287 (E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County)



NEVADA STATE CLEARINGHOUSE

Department of Conservation and Natural Resources, Division of State Lands
901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
(775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 05/27/2021

U.S. Federal Highway Administration

Nevada State Clearinghouse Notice E2021-287

Project: E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County

The Federal Highway Administration (FHWA) has announced the availability for public review and comment the Environmental Assessment (EA) for the Round Hill Pines Access Project. FHWA, in cooperation with the U.S Forest Service Lake Tahoe Basin Management Unit (LTBMU), Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), proposes to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50). For additional information or to view project documents please visit <https://highways.dot.gov/federal-lands/projects/nv/round-hill-pines>. Comments due to the Clearinghouse on June 25, 2021.

Follow the link below to find information concerning the above-mentioned project for your review and comment.

E2021-287 - <http://clearinghouse.nv.gov/public/Notice/2021/E2021-287.pdf>

- Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.
- Please reply directly from this e-mail and attach your comments.
- Please submit your comments no later than Friday June 25th, 2021.


Clearinghouse project archive

Questions? Scott Carey, Program Manager, (775) 684-2723 or nevadaclearinghouse@state.nv.us

☒ X No comment on this project ☐ Proposal supported as written

AGENCY COMMENTS:

Signature: Jim Balderson P.E.



Date: 06/04/2021

Requested By:

Distribution:

- Clark County
- Intermountain Range
- Nellis AFB
- State Fire Marshal Office
- Tribe - Battle Mountain Band Council
- Tribe - Confederated Tribes of Goshute
- Tribe - Duck Valley Shoshone-Paiute
- Tribe - Ely Shoshone
- Tribe - Ft. McDermitt Paiute-Shoshone
- Tribe - South Fork Band Council
- Tribe - Timbisha Shoshone Tribe
- Tribe - Winnemucca Colony Council
- Tribe - Yerington Paiute

Alan Jenne - Department of Wildlife, Elko
Alex Lanza - NDEP
Alisanne Maffei - Department of Administration
Alora Bartosz - Nevada Department of Agriculture
Alysa Keller - Legislative Counsel Bureau
Amanda Evans - NACO
Amber Torres - Tribe - Walker River Paiute
Amy Davey - Office of Traffic Safety
Andre Emme - Nevada Division of State Lands
Andrea Randall - Southern Nevada Water Authority

Andrea Woods - Tribe - Wells Band Council
 Angela Fuss - City of Reno
 Ann Bedlion - NAS Fallon
 Anna Higgins - Nevada Division of Forestry
 Anthony Sampson - Tribe - Pyramid Lake Paiute
 Arlan Melendez - Tribe - Reno Sparks Indian Colony
 Becky Kurtz - NAS Fallon
 Bhie Cie Ledesma - Tribe - Reno Sparks Indian Colony
 Bill Thompson - Department of Transportation, Aviation
 Birgit Henson - NDEP
 Blain Osorio - Tribe - Stewart Community Council
 Caleb McAdoo - NDOW
 Carl Erquiaga - Theodore Roosevelt Conservation Partnership
 Cathy Erskine - Department of Conservation & Natural Resources
 Cayenne Engel - Nevada Division of Forestry
 Chad Giesinger - Washoe County
 Chad Mellison - U.S. Fish and Wildlife Service
 Charles Schembre - NDEP
 Chelsea Kincheloe - Carson City Parks, Recreation and Open Spaces Department
 Cheva Gabor - US Forest Service
 Chris Thorson - Nevada Division of Water Resources
 Christina Wilson - Fire Marshal Office
 Christina Wilson - State Fire Marshal Office
 Christine Guerci-Nyhus - Colorado River Commission of Nevada
 Chuck King - Hawthorne Army Depot
 Clifford Banuelos - Inter-Tribal Council of Nevada, Inc.
 Conservation Program - Conservation Districts
 Coralee Ditman - Nevada Division of Forestry
 Cory Lytle - Lincoln County
 Curtis Anderson - Tribe - Las Vegas Paiute
 Cynthia Turiczek - Public Utilities Commission
 D. Bradford Hardenbrook - Department of Wildlife, Las Vegas
 Dallas Smales - Tribe - South Fork Band Council
 Dan Huser - Sagebrush Ecosystem Technical Team
 David Bobzien - Nevada State Energy Office
 David David - UNR Bureau of Mines
 David Mouat - Desert Research Institute
 Davis Gonzales - Tribe - Elko Band Council
 Deann McKay - State Land Office
 Donna Withers - NAS Fallon
 Ed Ryan - Smith and Mason Valleys Conservation District
 Eddy Quaglieri P.E. - Carson City Public Works Department
 Ellery Stahler - Nevada Division of State Lands
 Eric Miskow - Nevada Natural Heritage Program
 Garrett Wake - Nevada Division of Minerals
 Gary Reese - Nevada Division of Forestry
 Genevieve A. Skora - US Fish and Wildlife Service
 George Gholson - Tribe - Timbisha Shoshone
 Greg Lovato - NDEP
 Greg McKay - NV OHV Commission
 Heather Drake - Nevada Department of Taxation, Local Government, Centrally Assessed Property
 Holly Holwager - Nevada State Parks
 Ian Kono - Nevada Division of Water Resources
 Irvin Jim - Tribe - Woodfords Community Council
 James D. Morefield - Natural Heritage Program
 Jan Morrison - Humboldt Development Authority
 Janet Weed - Yomba Tribal Council
 Janice Keillor - Nevada Division of State Parks

Jasmine Kleiber - NDOW
 Jason Salisbury - Nevada Department of Wildlife
 Jenni Jeffers - Nevada Department of Wildlife
 Jennifer Haley - NAS Fallon
 Jennifer Newmark - NDOW - Wildlife Diversity
 Jered McDonald - Legislative Counsel Bureau-Research Division
 Jeremy Drew - Resource Concepts, Inc.
 Jim Balderson - NDEP
 Jim English - Washoe County
 Joe Holley - Tribe - Te-Moak Tribe of Western Shoshone
 John Christopherson - Nevada Division of Forestry
 John Muntean - UNR Bureau of Mines
 Jon Price - UNR Bureau of Mines
 Justin Barrett - U.S. Fish and Wildlife Service
 Kacey KC - Nevada Division of Forestry
 Karen Beckley - State Health Division
 Kelli Anderson - Division of Emergency Management
 Kelly McGowan - Sagebrush Ecosystem Technical Team
 Kenny Pirkle - Nevada Department of Wildlife
 Kevin Verre - NDOT
 Kim Borgzinner - NDEP
 Kris Urquhart - Nevada Department of Wildlife
 Kristin Szabo - Nevada Natural Heritage Program
 Kurt Haukohl - NDOT
 Larry Cruz - Hawthorne Army Depot
 Lee Ann Carranza - U.S. Fish and Wildlife Service
 Lee Bonner - NDOT
 Lindsey Lesmeister - NDOW
 Lorinda Wichman - Nye County
 Lowell Price - Commission on Minerals
 Mark Costa - NDOT
 Mark Enders - NDOW
 Mark Freese - Department of Wildlife
 Matt Maples - NDOW
 Matthew Glenn - Department of Wildlife
 Maureen Glennen - Esmeralda County
 Meghan Brown - Dept of Agriculture
 Mel Rodela - NDOT
 Melany Aten - Conservation Districts
 Meredith Gosejohan - Tahoe Resource Team - Division of State Lands
 Mervin Wright - Tribe - Pyramid Lake Paiute
 Michael J. Stewart - Legislative Counsel Bureau
 Michael Visser - Division of Minerals
 Micheline Fairbank - Nevada Division of Water Resources
 Michelle Barnes - Nevada Division of Water Resources
 Mike Anderson - Esmeralda County
 Mike Dzyak - State Fire Marshal Office
 Mike Miller - City of Fallon Public Works
 Mitch Ison - NDOT
 Miteshell Lanham - Lander County
 Moira Kolada - NDOW
 Peggy Roefer - Colorado River Commission
 Randi DeSoto - Tribe - Summit Lake Paiute
 Rebecca Cremeen - Tahoe Regional Planning Agency
 Rebecca Palmer - State Historic Preservation Office
 Richard Arnold - Nevada Indian Commission
 Robert Ghiglieri - Nevada Division of Minerals
 Robert Halstead - Nevada Agency for Nuclear Project

Robert Rule - NAS Fallon
Robin Schofield - NAS Fallon
Rodney Mike - Tribe - Duckwater Shoshone
Roger McDonald - Tribe - Carson Colony Community Council
Ronnie Snooks - Tribe - Yomba Shoshone
Rueben Vasquez - Tribe - Dresslerville Community Council
Ryan Shane - Nevada Division of Forestry
Samantha R. Essig -
Samantha Thompson - Department of Conservation & Natural Resources
Sarah Hills - NDEP
Sarena Nichols - Nevada Indian Commission
Serrell Smokey - Tribe - Washoe Tribe of NV and CA
Seth Johnson - Public Utilities Commission
Sherry Crutcher - Duck Valley Sho-Pai Tribes
Sherry Crutcher - Tribe - Duck Valley Shoshone-Paiute
Stacey Montooth - Nevada Indian Commission
Stephanie Rhodes - Tribe - Lovelock Paiute
Stephanie Simpson - NDEP
Susan Scholley - Legislative Counsel Bureau
Tanya Reynolds - Tribe - Te-Moak Tribe of Western Shoshone
Terry Rubald - Nevada Department of Taxation, Local Government, Centrally Assessed Property
Tim Mueller - Department of Transportation
Tim Rubald -
Tori Sundheim - Attorney General
Tracy Kipke - NDOW
Tyler Klimas - Washington Office
Valerie King - NDEP
Vicki Simmons - Tribe - Moapa Band Paiutes
Warren Turkett - Colorado River Commission of Nevada
Zachary Carter - NDEP
Zip Upham - NAS Fallon

Nevada State Clearinghouse Comments Received for E2021-287 E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County - Douglas

Comment # 3

From: Rebecca Palmer

Agency: None

Title: None

Phone: None

Email: rlpalmer@shpo.nv.gov

Date Received: 06/24/2021

Attached please find a copy of the comments for this project from the State Historic Preservation Office.

Scott Carey

From: NevadaClearinghouse
To: Rebecca Palmer
Subject: RE: Nevada State Clearinghouse Notice E2021-287 (E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County)

From: Rebecca Palmer <rlpalmer@shpo.nv.gov>
Sent: Tuesday, June 22, 2021 3:24 PM
To: NevadaClearinghouse <NevadaClearinghouse@lands.nv.gov>
Subject: RE: Nevada State Clearinghouse Notice E2021-287 (E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County)

The SHPO has reviewed the subject document. With the exception that the cultural resources section should be updated to indicate the current status of properties in the Area of Potential Effects for the project, the SHPO does not recommend any additional changes.

Rebecca Lynn Palmer
Administrator/State Historic Preservation Officer
Nevada State Historic Preservation Office
(O): 775-684-3443
rlpalmer@shpo.nv.gov

NEVADA STATE CLEARINGHOUSE



Department of Conservation and Natural Resources, Division of State Lands
901 S. Stewart St., Ste. 5003, Carson City, Nevada 89701-5246
(775) 684-2723 Fax (775) 684-2721

TRANSMISSION DATE: 05/27/2021

U.S. Federal Highway Administration

Nevada State Clearinghouse Notice E2021-287

Project: E2021-287 EA FHWA Round Hill Pines Access Project - Douglas County

The Federal Highway Administration (FHWA) has announced the availability for public review and comment the Environmental Assessment (EA) for the Round Hill Pines Access Project. FHWA, in cooperation with the U.S Forest Service Lake Tahoe Basin Management Unit (LTBMU), Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), proposes to improve safety for visitors entering and exiting the Round Hill Pines Resort from U.S. Highway 50 (US 50). For additional information or to view project documents please visit <https://highways.dot.gov/federal-lands/projects/nv/round-hill-pines>. Comments due to the Clearinghouse on June 25, 2021.

Follow the link below to find information concerning the above-mentioned project for your review and comment.

E2021-287 - <http://clearinghouse.nv.gov/public/Notice/2021/E2021-287.pdf>

- Please evaluate this project's effects on your agency's plans and programs and any other issues that you are aware of that might be pertinent to applicable laws and regulations.

- Please reply directly from this e-mail and attach your comments.
- Please submit your comments no later than Friday June 25th, 2021.

Clearinghouse project archive

Questions? Scott Carey, Program Manager, (775) 684-2723 or nevadaclearinghouse@state.nv.us

____No comment on this project ____Proposal supported as written

AGENCY COMMENTS:

Signature:

Date:

From: Mathis, Ryan (FHWA)
To: Edgar, Lindsay (FHWA)
Subject: FW: Safety parking
Date: Monday, June 28, 2021 7:28:08 AM

Another comment received for RHP.

Ryan Mathis, P.E. Project Manager
FULL TIME TELEWORK
Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

-----Original Message-----

From: Jackie G Adams <buckeyeintahoe@icloud.com>
Sent: Sunday, June 27, 2021 2:56 PM
To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>
Subject: Safety parking

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

How about prohibiting parking on 50 for people going to Zephyr Cove Beach? Somebody is going to get killed there, mark my words. They get out of their cars and are standing in the travel lane with their chairs and coolers and dogs. It is an AWUL situation. I can't believe parking on a highway is allowed. You guys have something going on w ZC Beach to allow it so they don't lose customers? It's an accident waiting to happen and I wish you'd do something about it. And then they come back after drinking all day and get in their cars the same way, standing in travel lane, only now they're bobbing and weaving. PLEASE make that stretch no parking. It's as dangerous, if not more, as RHP.

Thank you...Jackie Adams

From: Mathis, Ryan (FHWA)
To: Edgar, Lindsay (FHWA)
Subject: FW: I-50 South Lake Tahoe
Date: Wednesday, June 30, 2021 8:17:17 AM

I received the below email, technically after comments were due and it's outside of our project area (to the north), but thought I would pass along just in case.

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Laura Nelson <leadn1@outlook.com>
Sent: Monday, June 28, 2021 10:31 AM
To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>
Cc: Laura Nelson <leadn1@outlook.com>
Subject: I-50 South Lake Tahoe

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hello Ryan,

I have been in communication with NDOT since 2018 after moving to Tahoe in Zephyr Cove, NV from San Antonio, TX in 2017. What first prompted me to contact NDOT was being a year round resident the insanely dangerous entrance/exit in and out of our neighborhood at Zephyr Heights (I-50 and Martin). We have blind corner turns on both sides which literally our neighbors talk about how we say a "Hail Mary" upon pulling out onto 50 or turning into our neighborhood. A lot of times we have to roll our windows down, turn off music and listen for tire rotation noise to help project if it is safe or not to try and go. Just to be clear we are in our early 50's with no impairments. We have kids in their 20's and they even say how insanely dangerous it is.

Since 2018 I have been in communications with NDOT countless times, I have been sent the nice programmed letter thank you for contacting us but at this time we don't see an issue with your neighborhood and now the latest letter says we are now working on a planning commission for I-50 corridor. The California side of Tahoe I-50's solution is to add another round about. We don't have those much at all in Texas and my experience so far with them in CA and NV is they are ok in certain areas but on a main thoroughfare like I-50 especially with 18wheelers and all the traffic that is not a valid consideration. Plus we don't have the width needed to engineer those roundabouts on the NV side. I have been in countless forums because folks up here are fed up with NDOT not doing anything. Countless lives have been taken on this I-50 corridor. Folks think new signs posted to slow down or to reduce the speed is the solution. I hear that suggestion all the time. Honestly that is not going to do a dang thing. Local folks and the truckers are used to driving extremely fast on 50 and most visitors are so excited to get to Tahoe they are driving fast too. So slow down signs or a reduction in the speed everyone is going to ignored. Speed bumps are another suggestion folks have thrown out there, randomly placed will not work because of snow and snowplows. So that leaves us with one solution. The one I have been suggesting and gunning for since 2018. A series of

traffic lights with designated turn signals along the I-50 corridor (lights that are all on timers, not sensors, leading the traffic in and out of Tahoe on the NV side). Starting from Cave Rock all the way into Round Hill. Off hand there are about 5 wicked blind turns including ours in Zephyr Heights and The Presbyterian Conference Center which is close enough to each other to have a shared 4 way light. The concept is like "herding cattle" in and out of Tahoe in a safe controlled manner. I understand a lot of accidents and fatalities along this I-50 corridor are drug/alcohol impairment related. I believe these lights if spread out properly should "not allow" travelers to get up to a high enough speed between the lights which would help control the speed impact if an accident should occurs. I am just sickened and so tired of reading in our local news which I get daily on my phone about another lost life, a fatal car crash on I-50 through this corridor. I true believe the fatalities can be reduced and controlled by adding a series of lights. I understand it is an EXTREMELY expensive project, so I have been told by NDOT on multiple occasions as well as local folks I speak with in forums about this ongoing issue. Surely there has to be a price on saving lives. With Tahoe's growth comes popularity, with popularity you will have an increase in traffic which is where we are in this day and age. Thank you for your time and consideration!

Many Thanks,
Laura D. Nelson
<><
Managing Partner
E&L Enterprise
DBA: Papa John's Pizza
Direct: 210-241-3368
leadn1@outlook.com

*Courtesy of iPhone/iPad spell check: Please excuse any brevity, spelling or grammar.

From: [Mathis, Ryan \(FHWA\)](#)
To: [Edgar, Lindsay \(FHWA\)](#)
Subject: FW: US 50 Round Hill Pines Access Project
Date: Monday, June 28, 2021 1:12:57 PM
Attachments: [Google Earth Location.pdf](#)
[NV FLAP US50\(1\) 70% Plans New Entrance Location.pdf](#)

FYI

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Mathis, Ryan (FHWA)
Sent: Thursday, June 3, 2021 11:01 AM
To: Richard McGuffin <rmcguffin@ajattorneys.com>
Cc: Matthew Laster <matthew@ajattorneys.com>
Subject: RE: US 50 Round Hill Pines Access Project

Mr. McGuffin,

Thanks for reaching out. I've attached some relevant plan sheets from our most recent interim design review. These plans are a work in progress and not final. However, I do know that the proposed location of the new RHP entrance road has not changed since this submittal. A few notes on the sheets I'm sending:

1. Sheet C02 (see top right hand corner) shows the new Round Hill Pines Resort access road at the top of the page (between stations 27 and 28). We located it here in an attempt to maximize sight distance in both directions. For reference, the road going from left to right in the plan view is US50. It is a bit hard to see, but right at the intersection with the new access road is an existing manhole (I circled it in red in the PDF – you'll have to zoom in to see it better). If you are out on site, the manhole that is out there is a good reference for the location.
2. Sheet C03 has the Sierra Sunset Lane entrance shown. It is shown as light grey dashed lines above US50 between stations 33 and 34. As a rough estimate, the new access road is about 550' to the south of Sierra Sunset Lane.

Further, I've included a screenshot from Google Earth that points out the manhole located right at the new access road.

Hopefully this helps show exactly where the new road will be located, but if not let me know. There's a lot going on with lines on the plan sheets and it can be hard to look at and know what everything is. Feel free to reach out with any other questions.

Thanks,

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Richard McGuffin [<mailto:rmcguffin@ajattorneys.com>]

Sent: Wednesday, June 2, 2021 11:24 AM

To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>

Cc: Matthew Laster <matthew@ajattorneys.com>

Subject: US 50 Round Hill Pines Access Project

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Mr. Mathis,

My firm represents the owners of the three properties to the north of the Round Hills Pines Beach Resort. All three properties are accessed via Sierra Sunset Lane. The owners of all three properties have contacted me with some concerns regarding the above-referenced project. Specifically, the proposed relocation of the Round Hill Pines entrance and its impact on their ability to enter/exit their property.

I have reviewed all of the information that has been made available to the public in connection with this project, including the recently released Environmental Assessment. On September 25, 2019, I attended a public presentation at the LTBMU Office in South Lake Tahoe. Shortly thereafter, I met with several individuals associated with the project at Sierra Sunset Ln. and they showed me, and a couple of the property owners, roughly where the new entrance would be located. However, they were not able to identify the exact location.

To this point, I have not been able to obtain a map and/or plans showing the exact location of the new RHP entrance and nobody has been able to identify where it would be located. Are you able to provide this information? It would be helpful for clients and greatly appreciated.

I look forward to hearing back from you.

Kind regards,

Rich

RICHARD J. MCGUFFIN, Esq.

276 Kingsbury Grade, Suite 2000 | Post Office Box 3390 | Lake Tahoe, Nevada 89449

☎ 775.588.6676 | 📠 775.588.4970 | ✉ rmcguffin@ajattorneys.com

ALLING & JILLSON, LTD.

ATTORNEYS AT LAW

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From: Mathis, Ryan (FHWA)
To: Edgar, Lindsay (FHWA)
Subject: FW: US 50 Round Hill Pines Access Project-Objection to EA
Date: Wednesday, June 23, 2021 4:13:40 PM
Attachments: image001.gif

FYI – see below.

Ryan Mathis, P.E. *Project Manager*

FULL TIME TELEWORK

Office: (720) 963-3728 | Mobile: (202) 365-7669 | Ryan.Mathis@dot.gov

From: Richard McGuffin <rmcguffin@ajattorneys.com>
Sent: Wednesday, June 23, 2021 3:55 PM
To: Mathis, Ryan (FHWA) <ryan.mathis@dot.gov>
Cc: Matthew Laster <matthew@ajattorneys.com>
Subject: US 50 Round Hill Pines Access Project-Objection to EA

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Mr. Mathis,

As stated in my previous correspondence, my firm represents the owners of 530, 540, 550 and 560 Sierra Sunset Lane, the properties located immediately north of the Round Hill Pines Beach Resort. If you recall, the owners of these properties have previously expressed concerns regarding the proposed relocation of the Round Hill Pines entrance, specifically its impact on their ability to safely enter and/or exit their property. Note, the proposed relocation of the Round Hill Pines entrance does not just affect/threaten the safety of the relative handful of people entering/exiting Sierra Sunset Lane, but it would also affect the safety of everyone who would be entering/exiting the proposed new Round Hill Pines entrance and others traveling on US HWY 50. Following an in-depth review of the “Joint Environment Assessment, US Highway 50 Round Hill Pines Access Project” (the “EA”), prepared by the FHWA-CFLHD, my clients’ concerns have only increased.

Section 3.9, Transportation, of the EA, claims to describe “the potential impact to transportation and traffic on and around the Project corridor that might be expected from implementation of the Proposed Project Alternative” and concludes that “[t]he project would not cause a substantial adverse effect upon the existing transportation system or alter existing traffic patterns, or increase traffic hazards.” This claim and, more importantly, the conclusion are deeply flawed.

The proposed location of the new Round Hill Pines entrance is roughly 550’ to the south of Sierra Sunset Lane. The EA does not discuss the impacts to and on the intersection at Sierra Sunset Lane. Notably, how will the proposed new Round Hill Pines entrance affect the existing southbound acceleration lane from Sierra Sunset Lane and along westbound US HWY 50? And, will the proposed new Round Hill Pines entrance make it difficult for emergency service providers to access the properties located on Sierra Sunset Lane as traffic stacks up along US HWY 50, blocking access to the Sierra Sunset Lane entrance? And, how will the proposed new Round Hill Pines entrance affect those

turning left/northbound onto US HWY 50 from Sierra Sunset Lane (limited sight distance coupled with the possibility of new acceleration lane seems like a recipe for disaster)? Without addressing these questions or discussing the potential impacts of the Sierra Sunset Lane intersection, how can the EA conclude that “the project would not....increase traffic hazards”?

Until a complete analysis is performed (one that includes a study of the impacts of the proposed new Round Hill Pines entrance on the Sierra Sunset Lane Intersection), a statement of “no significant impact” cannot be made. The FHWA-CFLHD’s EA is incomplete, at least with respect to its findings in Section 3.9, and its conclusions are, therefore, inaccurate. More importantly, the findings, if followed, will almost certainly increase traffic hazards along US HWY 50.

On behalf of my clients, I respectfully request that the FHWA-CFLHD require a traffic study that looks at the whole picture, which necessarily includes the impact of this project on the existing intersection of Sierra Sunset Ln. and US HWY 50. Furthermore, it should be noted that NDOT is currently soliciting input from the public regarding its US HWY 50 East Shore Corridor Management Plan, which may impact the portion of US HWY 50 subject to this Project.

Additionally, Section 3.10, Noise, of the EA is woefully inadequate, as measurements were not taken from the locations of the proposed improvements and receptors were not placed near the private residential properties. As such, how can the EA reasonably reach the conclusion that proposed new Round Hill Pines entrance will not make an audible difference to the Sierra Sunset Lane properties, specifically 560 Sierra Sunset Lane and 530 Sierra Sunset Lane? It does not appear that the EA even considers the potential impact to 530 Sierra Sunset, as some receptors were at least placed nearby 560 Sierra Sunset Lane.

Finally, does the FHWA-CFLHD or the current permittee have any plans for the trash that will inevitably be strewn about by users of the proposed new Round Hill Pines entrance? Who will be responsible for clean-up and how often will clean-up/trash collection occur?

I look forward to hearing back from you. If you have any questions, feel free to give me a call.

Sincerely,

Rich

RICHARD J. MCGUFFIN, Esq.
276 Kingsbury Grade, Suite 2000 | Post Office Box 3390 | Lake Tahoe, Nevada 89449
☎ 775.588.6676 | 📠 775.588.4970 | ✉ rmcguffin@jalattorneys.com



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Appendix D

Section 106 and Section 4(f) Concurrence Letters



NEVADA
**STATE HISTORIC
PRESERVATION OFFICE**

STATE OF NEVADA
Department of Conservation and Natural Resources
Steve Sisolak, Governor
Bradley Crowell, Director
Rebecca L. Palmer, Administrator, SHPO

September 9, 2021

Ryan Mathis
Project Manager
Central Federal Lands Highway Division
Federal Highway Administration
12300 West Dakota Avenue, Suite 380
Lakewood, CO 80228-2583

Re: *Architectural History Inventory Round Hill Pines Access Road Improvement Project, Douglas County, Nevada, Revised July 2021*; FHWA Project No. NV FLAP US 50(1); SHPO UT# 2021-6717; 28316

Dear Mr. Mathis:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject documents received June 17, July 13, 16, and 22, 2021 in accordance with Section 106 of the National Historic Preservation Act (NRHP) of 1966, as amended.

Project partners for this undertaking include the Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD) in corporation with the United States Forest Service Lake Tahoe Basin (USFS-LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Authority (TRPA). FHWA-CFLHD is the lead federal agency.

Please refer to the SHPO's previous letter dated May 18, 2021 regarding our previous comments on the project description, APE, and identification and evaluation of historic properties, including concurrence with National Register eligibility determinations.

This project has been revised to retain the circa 1932 Round Hill Pines stone entrance gate and wall (#S851). In addition, several safety measures will be implemented to minimize the appearance of the existing access road to Round Hill Pines Resort visitors: reducing the existing access road pavement approach section, removing the existing LTBMU signs from the stone entrance wall, keeping the existing access gate consistently closed and locked, adding temporary and permanent signage to direct travelers to the new access point, and adding vegetation to discourage parking adjacent to the stone entrance wall.

As the SHPO's May 18, 2021 letter stated, substantial portions of the Round Hill Pines historic district still exist, and the proposed 2002 demolition of buildings did not occur. The historic district was previously determined in 2002 to be eligible for listing in the National Register of Historic Places (NRHP) under the Secretary of Interior's Significance Criterion A and C. The SHPO appreciates the FHWA-CFLDH sharing information with the USFS-LTBMU and updating the USFS-LTBMU's records on this historic resource.

Ryan Mathis
 September 9, 2021
 Page 2 of 3

For the purposes of this undertaking, the FHWA-CFLHD is assuming that the stone entrance gate and wall (#S851) is a contributing resource to the historic district. The SHPO agrees that this feature dates to the period of significance for the Resort and retains sufficient integrity to be considered a contributing element to the historic district.

The SHPO acknowledges that the architectural inventory report has been revised to reflect the above information. The SHPO hand-corrected page 12 (section 3.3.1.4) to delete the sentence regarding the 2002 demolition as it did not occur. The SHPO also hand-corrected the archaeological survey report to delete this language on page 10.

Native American Consultation

The SHPO acknowledges FHWA-CFLDH's clarification that consultation with Native American tribes is being conducted per 36 CFR § 800.3(f)(2). If this consultation results in the identification of properties of religious and/or cultural significance that could be affected by the undertaking, the SHPO looks forward to consulting with the FHWA-CFLHD on the National Register eligibility of historic properties and possible effects of the undertaking per 36 CFR §800.4(c) and 36 CFR §800.4(d).

Consultation with Interested Parties

The SHPO acknowledges FHWA-CFLDH's statement that no other consulting parties were identified for this project.

Finding of Effect

FHWA-CFLHD has determined that this undertaking will have **No Adverse Effect** on historic properties. The SHPO concurs.

As previously requested, in order for the SHPO to enter the inventory forms into our statewide inventory database NVCRIS, please submit the GIS data and shapefiles to our office. You may email this information to our NVCRIS Manager, Karyn De Dufour, at (775) 684-3447 or via email at kdedufour@shpo.nv.gov

Lastly, per the meeting on June 9, 2021 attended by the FHWA-CFLHD and the SHPO, the SHPO looks forward to consulting with the USFS-LTBMU on proposed future undertakings at the NRHP-eligible Round Hill Pines Resort historic district pursuant to the requirements of the Programmatic Agreement titled *Programmatic Agreement Among The U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, And The Advisory Council on Historic Preservation Regarding the Processes For Compliance With Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region*. The SHPO encourages the USFS-LTBMU to update the architectural survey for this historic district and fill out a Historic District Resource Assessment (RA) form which is available on our website. Our office is available to meet to discuss upcoming projects.

Ryan Mathis
September 9, 2021
Page 3 of 3

Should you have any questions concerning this correspondence, please contact me at (775) 684-3437 or by e-mail at rreed@shpo.nv.gov

Sincerely,

A handwritten signature in dark ink, appearing to read "R. K. Reed". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Robin K. Reed
Deputy State Historic Preservation Officer



U.S. Department
of Transportation
**Federal Highway
Administration**

Central Federal Lands Highway Division

August 5, 2021

12300 West Dakota Avenue
Suite 380
Lakewood, CO 80228-2583
Office: 720-963-3728
Fax: 720-963-3596
ryan.mathis@dot.gov

In Reply Refer To:
HFHD-16

Gwen Sanchez, Forest Supervisor
USDA Forest Service, Lake Tahoe Basin Management Unit
Forest Supervisor's Office
35 College Drive
South Lake Tahoe, CA 96150

Re: Round Hill Pines Resort Section 4(f) *De minimis* Concurrence Request for the Round Hill Pines Access Project in Douglas County, Nevada

Dear Ms. Sanchez:

This letter constitutes a request for review and concurrence on a finding of Section 4(f) *de minimis* use of the Round Hill Pines Resort as a result of the Round Hill Pines Access Project. Below is a description of the proposed project, an explanation of Section 4(f), a description of the Section 4(f) use of the Round Hill Pines Resort and the public involvement process.

Proposed Project

The Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD), in cooperation with the Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), is proposing the relocation of the Round Hill Pines Resort access road and U.S. Highway 50 (US 50) intersection, the construction of a new access road to the Round Hill Pines Resort, and improvements to a 0.35-mile segment of US 50 near Zephyr Cove, Nevada.

The purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from US 50 in Douglas County near Zephyr Cove, Nevada. The project is needed because the current US 50 entrance configuration into the Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50 for vehicles accessing the resort. In addition to the current configuration, the Resort access road contains a narrow roadway width, steep grades, and sharp curves. This configuration limits the flow for two-way traffic containing transit and recreational vehicles. This project was selected and programmed through the Federal Lands Access Program, which is allocated from the Federal Highway Trust Fund. It is anticipated that construction would start in May 2022.

The project includes the relocation of the Round Hill Pines Resort access road and US 50 intersection approximately 0.2 mile further to the north from the existing location. U.S. Highway 50 would be widened at the relocated intersection to accommodate a new northbound median left turn bay and northbound US 50 acceleration lane. The median left turn bay would accommodate

travelers who are headed northbound along US 50 and are turning across traffic to enter the Round Hill Pines Resort. U.S. Highway 50 within the project area would receive a pavement mill and overlay, lane striping, pavement markings and a safety edge in addition to the relocated intersection. The Round Hill Pines Resort access road would be constructed on new alignment. The access road would be approximately 0.14-mile-long and reconstructed to accommodate two 12-foot lanes with 2-foot wide shoulders.

The Round Hill Pines Access Project is located within lands owned and managed by the LTBMU and NDOT. The NDOT will amend the right-of-way easement deed to accommodate temporary construction impacts and permanent improvements located outside of the existing NDOT right-of-way easement deed.

The Round Hill Pines Resort is located within the project area along US 50, on the east shore of Lake Tahoe. It is located on U.S. Forest Service land managed by the LTBMU, but the resort and marina facilities are operated by a concessionaire through a special use permit from the LTBMU. Round Hill Pines Resort provides the following recreational facilities: a beach area along a 1000-foot long stretch of the east shore of Lake Tahoe, paved concrete parking areas that serve the resort area. Day use activities offered along the beach include swimming, beach volleyball, and general recreation along the beach. The Round Hill Pines Marina offers watercraft mooring, boat access at the pier, boat, jet-ski, kayak, stand up paddleboard rentals, daily cruises along Lake Tahoe, a newly renovated restaurant, and restrooms.

Section 4(f)

As a part of the environmental review process, the FHWA has responsibilities to comply with Section 4(f) of the Department of Transportation Act of 1966 (which has been later revised and recodified but still referred to as Section 4(f)). The intent of the Section 4(f) Statute, 49 U.S.C. Section 303, and the policy of the FHWA is to avoid transportation use of historic sites and publicly owned recreational areas, parks, and wildlife and waterfowl refuges. The Round Hill Pines Resort qualify as Section 4(f) properties. If the FHWA determines that a transportation use of these types of properties, also known as Section 4(f) properties, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete. *De minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not “adversely affect the activities, features and attributes” of the Section 4(f) resource.

The finding of a *de minimis* impact on recreational and wildlife resources can be made when:

- 1) The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
- 2) The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
- 3) The official(s) with jurisdiction over the property are informed of FHWA’s intent to make the *de minimis* impact finding based on their written concurrence that the project will not adversely

affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Section 4(f) Use of Round Hill Pines Resort

As part of the Project, the Round Hill Pines Resort access road will be relocated further to the north and constructed on NDOT and LTBMU-managed land. The access road would extend predominately through LTBMU open space that is designated as the Round Hill Pines Resort. Approximately 2.3 acres of open space would be converted to a transportation use for the access road. During the design every effort was made to minimize the footprint of the project, while also considering the short- and long-term impacts to adjacent recreation sites. The FHWA-CFLHD continues to coordinate closely with LTBMU, NDOT, and TRPA through project development and in review of the plans and specifications associated with the project. The work will consist of some temporary disturbance to the Round Hill Pines Resort to construct the project; however, access to the Round Hill Pines Resort will be maintained throughout construction. The LTBMU, in partnership with the concessionaire, is also conducting phased improvements to the Round Hill Pines Resort that will include parking consolidation and improving traffic flow into the newly designated parking lot areas. The Project would support this future LTBMU improvement project and would also provide a safer access location for Resort visitors.

Public Notice

These impacts were discussed in the Round Hill Pines Access Project Environmental Assessment, which was released for a 30-day public review starting on May 28, 2021. No comments specifically on the anticipated recreation impacts were received.

The FHWA requests that the LTBMU, as the property owner of the Round Hill Pines Resort and involved with daily management of the Round Hill Pines Resort, concur with the determination of a *de minimis* effect. This can be accomplished by signing the statement provided below and returning a copy of this letter to our office.

Regarding the proposed Round Hill Pines Access project, as described above, I concur that the project will have a *de minimis* impact on the Round Hill Pines Resort. The project will not adversely affect the activities, features, and attributes that make the property eligible for Section 4(f) protection.

GWEN SANCHEZ Digitally signed by GWEN SANCHEZ
Date: 2021.08.06 15:17:28 -07'00'

Gwen Sanchez, LTBMU Forest Supervisor

We would like to thank the LTBMU for their cooperation with this project. Please contact Lindsay Edgar at Lindsay.edgar@dot.gov or 720-963-3684 if you have any questions regarding this matter.

Sincerely,

RYAN DANIEL MATHIS Digitally signed by RYAN DANIEL MATHIS
Date: 2021.08.05 16:14:21 -06'00'

Ryan Mathis
Project Manager



U.S. Department
of Transportation
**Federal Highway
Administration**

Central Federal Lands Highway Division

August 23, 2021

12300 West Dakota Avenue
Suite 380
Lakewood, CO 80228-2583
Office: 720-963-3728
Fax: 720-963-3596
ryan.mathis@dot.gov

In Reply Refer To:
HFHD-16

Scott Morgan, Director
Douglas County Community Services/Parks and Recreation
1329 Waterloo Lane
Gardnerville, NV 89410

Re: Stateline to Stateline Bike Trail Section 4(f) *De minimis* Concurrence Request for the Round Hill Pines Access Project in Douglas County, Nevada

Dear Mr. Morgan:

This letter constitutes a request for review and concurrence on a finding of Section 4(f) *de minimis* use of the Stateline to Stateline bike trail as a result of the Round Hill Pines Access Project. Below is a description of the proposed project, an explanation of Section 4(f), a description of the Section 4(f) use of a portion of the Stateline-to-Stateline bike trail and the public involvement process.

Proposed Project

The Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD), in cooperation with the Lake Tahoe Basin Management Unit (LTBMU), the Nevada Department of Transportation (NDOT), and the Tahoe Regional Planning Agency (TRPA), is proposing the relocation of the Round Hill Pines Resort access road and U.S. Highway 50 (US 50) intersection, the construction of a new access road to the Round Hill Pines Resort, and improvements to a 0.35-mile segment of US 50 near Zephyr Cove, Nevada.

The purpose of the project is to increase safety and improve accessibility for visitors entering and exiting the Round Hill Pines Resort from US 50 in Douglas County near Zephyr Cove, Nevada. The project is needed because the current US 50 entrance configuration into the Resort has safety concerns due to limited sight distance for vehicles traveling in both directions along US 50 and unprotected turning movements across US 50 for vehicles accessing the resort. In addition to the current configuration, the Resort access road contains a narrow roadway width, steep grades, and sharp curves. This configuration limits the flow for two-way traffic containing transit and recreational vehicles. This project was selected and programmed through the Federal Lands Access Program, which is allocated from the Federal Highway Trust Fund. It is anticipated that construction would start in May 2022.

The project includes the relocation of the Round Hill Pines Resort access road and US 50 intersection approximately 0.2 mile further to the north from the existing location. U.S. Highway 50 would be widened at the relocated intersection to accommodate a new northbound median left turn bay and northbound US 50 acceleration lane. The median left turn bay would accommodate travelers who are headed northbound along US 50 and are turning across traffic to enter the Round Hill Pines Resort. U.S. Highway 50 within the project area would receive a pavement mill and overlay, lane striping, pavement markings and a safety edge in addition to the relocated intersection. The Round Hill Pines

Resort access road would be constructed on new alignment. The access road would be approximately 0.14-mile-long and reconstructed to accommodate two 12-foot lanes with 2-foot wide shoulders.

The Round Hill Pines Access Project is located within lands owned and managed by the LTBMU and NDOT. The NDOT will amend the right-of-way easement deed to accommodate temporary construction impacts and permanent improvements located outside of the existing NDOT right-of-way easement deed. The Stateline to Stateline bike trail (South Demonstration Segment) is located on the east shore of Lake Tahoe, beginning at Laura Drive and ending on the Round Hill Pines Resort property at US 50. The segment is approximately 2.2 miles in length and includes a 10-foot wide paved path with 2-foot wide shoulders on both sides. This segment is a component of the larger Nevada Stateline to Stateline Bikeway and overall regional shared-use path network.

Section 4(f)

As a part of the environmental review process, the FHWA has responsibilities to comply with Section 4(f) of the Department of Transportation Act of 1966 (which has been later revised and recodified but still referred to as Section 4(f)). The intent of the Section 4(f) Statute, 49 U.S.C. Section 303, and the policy of the FHWA is to avoid transportation use of historic sites and publicly owned recreational areas, parks, and wildlife and waterfowl refuges. The Round Hill Pines Resort qualify as Section 4(f) properties. If the FHWA determines that a transportation use of these types of properties, also known as Section 4(f) properties, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete. *De minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not “adversely affect the activities, features and attributes” of the Section 4(f) resource.

The finding of a *de minimis* impact on recreational and wildlife resources can be made when:

- 1) The transportation use of the Section 4(f) resource, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
- 2) The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
- 3) The official(s) with jurisdiction over the property are informed of FHWA’s intent to make the *de minimis* impact finding based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

Section 4(f) Use of the Stateline to Stateline Bike Trail (South Demonstration Segment)

As part of the Project, the Round Hill Pines Resort access road will be relocated further to the north and constructed on NDOT and LTBMU-managed land. A 549-foot long portion of the Stateline-to-Stateline bike trail will be removed due to construction of the relocated access road and will not be replaced. The Stateline to Stateline bike trail would terminate at an existing paved path that leads to the Round Hill Pines public beach area. In previous project discussions, the LTBMU, TRPA, and Douglas County support removing this short segment of trail because it currently terminates at US 50 in an undesirable location and does not continue further along the East Shore of Lake Tahoe. During several site visits in 2019, trail users were observed directly turning around at the US 50 terminus, instead of crossing the roadway. The LTBMU, TRPA, and Douglas County have stated that a future

Stateline to Stateline bike trail project is in the planning stages and this future project will provide trail users with a safer US 50 crossing location.

During the design every effort was made to minimize the footprint of the project, while also considering the short- and long-term impacts to adjacent recreation sites. The FHWA-CFLHD continues to coordinate closely with LTBMU, NDOT, and TRPA through project development and in review of the plans and specifications associated with the project. The Proposed Project would not adversely affect the recreational attributes of the Stateline to Stateline bike trail. The loss of 549-linear feet of Stateline to Stateline bike trail would be minor in the context of the overall trail length. Recreational trail users would be able to get on the Stateline to Stateline bike trail at Laura Drive or Kahle Drive and access the Round Hill Pines Resort. The removed trail segment will be replaced by a future Stateline to Stateline bike trail project.

Public Notice

These impacts were discussed in the Round Hill Pines Access Project Environmental Assessment, which was released for a 30-day public review starting on May 28, 2021. No comments specifically on the anticipated recreation impacts were received.

The FHWA requests that Douglas County, as the official with jurisdiction and involved with daily management of the Stateline to Stateline bike trail, concur with the determination of a *de minimis* effect. This can be accomplished by signing the statement provided below and returning a copy of this letter to our office.

Regarding the proposed Round Hill Pines Access project, as described above, I concur that the project will have a *de minimis* impact on the Stateline to Stateline bike trail. The project will not adversely affect the activities, features, and attributes that make the property eligible for Section 4(f) protection.

 8/24/21

Scott Morgan, Douglas County Community Services/Parks and Recreation Director

We would like to thank the LTBMU for their cooperation with this project. Please contact Lindsay Edgar at Lindsay.edgar@dot.gov or 720-963-3684 if you have any questions regarding this matter.

Sincerely,

RYAN DANIEL MATHIS

Ryan Mathis
Project Manager

Digitally signed by RYAN DANIEL
MATHIS
Date: 2021.08.23 15:10:19 -06'00'

Appendix E
Environmental Commitments

Mitigation Measure	Implementation Timing	Responsible Agency or Party
Aesthetics and Visual Resources		
MM AES-1. Design applicable structures to be consistent with NDOT, TRPA, and LTBMU design standards and design review guidelines and compatible with existing architectural features in the Round Hill Pines Resort area. Project structures such as guardrails and retaining walls will be designed to meet TRPA design standards (Chapter 36 of the TRPA Code) and design review guidelines. Structures located within the NDOT right-of-way (ROW) will also meet NDOT design standards. A narrow range of colors and materials will be used. Materials will be primarily natural or natural appearing. Ranges of subdued earth tone colors will be used that blend, rather than contrast, with the existing vegetation and soils color in and around the immediate area. The project will reflect the visual characteristics of line, form, color, and texture found in the characteristic landscape.	Prior to construction	FHWA-CFLHD
MM AES-2. Design project features consisted with Chapter 66 of the TRPA Code. The project will comply with Chapter 66 of the TRPA Code. The total visible area of lakeward facing surfaces of project features (e.g. retaining walls and safety rails) will not exceed the total surface area allowed.	Prior to construction	FHWA-CFLHD
Biological Resources: Aquatic Resources, Vegetation, and Wildlife		
MM BIO-1. Minimize ground and vegetation disturbance, and limit construction and staging footprints. Ground and vegetation disturbance will be minimized during construction to avoid or minimize loss of native vegetation and disturbance to terrestrial wildlife habitat. Construction staging, vehicle use and parking, and placement of equipment and materials will be restricted the designated staging area only. The construction limits will be identified by placing silt fencing or other fencing mechanism to deter accidental encroachment.	Prior to construction	FHWA-CFLHD

<p>MM BIO-2. Minimize removal of trees that are 24-inches diameter at breast height (dbh) or greater. The proposed widening along US 50 and construction of the relocated Round Hill Pines Access Road will require the removal of live trees over 24 dbh or greater. For any tree 24 inches dbh or greater that will be felled during the construction of the project, removal will occur, as allowable, under circumstances specified in Section 61.4(A)(7) of the TRPA Code. Section 61.1.4(A)(7) states that, for EIP Projects, "Trees larger than 30 inches dbh in the westside forest types and larger than 24 inches dbh in eastside forest types may be removed when it is demonstrated that the removal is necessary for the activity." The Round Hill Pines Access Project is an EIP Project (EIP No. 04.01.03.0137) and subject to this Code provision.</p>	<p>Prior to and during construction</p>	<p>FHWA-CFLHD</p>
<p>MM BIO-3. Coordinate tree felling schedule with the Lake Tahoe Basin Management Unit to minimize effects to migratory birds. The avian breeding/nesting season occurs approximately between March 1 through September 1, depending on species and weather. To avoid impacts to migratory birds, conduct tree felling after September 1 and before March 1. Coordinate with LTBMU to utilize their staffing and expertise to fell and remove trees. Tree stumps would not be removed at this time and would remain in ground until the grading season (May 1st to October 15th).</p> <p>If vegetation or other substrates that could support nesting birds would be removed during the nesting season, a qualified approved biologist will be retained to conduct focused preconstruction surveys for active nest sites of migratory birds. The survey area will be limited to the areas where project activities could lead to direct destruction of active nests. The results of nesting bird surveys conducted between March 1 and June 15 will be considered valid for no more than 14 days (i.e., the onset of each construction phase should begin no later than 14 days after these surveys are completed). Results of surveys conducted after June 15 can be considered valid for up to 30 days. Because most neotropical migrant birds that nest in the region typically arrive and begin establishing territories between March and June, and new individuals and species continually arrive in the area during this period, negative survey results (e.g., absence, no nesting activity) for a given location may be valid only for a short period. If an active nest is located, removal of the nest site will be avoided until it is no longer active. Exclusionary buffer zones (to be determined based on species-specific needs) will be created surrounding any active nests within the project area. Buffers will be established by a qualified biologist prior to the start of construction. If an area is given clearance to proceed with construction and nesting subsequently occurs, it will be assumed that the individuals are acclimated to the ongoing disturbance of construction. If circumstances exist such that future activities may result in the abandonment or failure of the nest, as determined by a qualified biologist, an appropriate exclusionary buffer will be established.</p>	<p>Prior to and during construction</p>	<p>FHWA-CFLHD and LTBMU</p>

<p>MM BIO-4. Prevent the contamination of construction-related materials by noxious weeds and invasive plant species. The following actions will ensure that construction-related materials entering or leaving the project area are not potential sources of noxious weed infestations.</p> <ul style="list-style-type: none"> • The construction contractor will ensure that any clothing, footwear, and equipment used during construction is free of soil, seeds, vegetative matter or other debris or seed-bearing material before entering the construction area. • Where it is not possible to keep equipment out of sites infested with noxious weeds, the equipment will be cleaned so that it is free of soil, seeds, vegetative matter or other debris before being moved from infested sites to un-infested sites and before being transported out of the project area. • The construction contractor will ensure that any fill soil, mulch, seeds, and straw materials used during construction and implementation of BMPs are weed-free. Certified weed-free material will be used. • All earth-moving equipment, gravel, fill, or other materials will be required to be weed free. Sand, gravel, rock, or organic matter from an approved onsite source will be used when possible. Otherwise, weed-free materials will be obtained from gravel pits and fill sources that have been surveyed and approved by a botanist or ecologist at the LTBMU. • The construction contractor will ensure that equipment and vehicles are washed when exiting the perimeters of infested areas before proceeding outside the infested perimeters to un-infested areas. 	During construction	FHWA-CFLHD, LTBMU, Contractor
<p>MM BIO-5. Revegetate/landscape using appropriate native planting mixes. Appropriate plant species native to the area that do not require long-term irrigation, or species approved by a qualified botanist for local use, will be used when revegetating disturbed areas and for landscaping improvements. This measure will contribute to minimizing impacts to areas that are temporarily disturbed during project construction, but will also help to minimize permanent loss of native habitats. LTBMU will provide assistance with landscape design for permanent vegetation establishment.</p>	Prior to construction	FHWA-CFLHD, LTBMU
Cultural Resources		
<p>MM CR-1. Cease work and implement notification procedures for previously undiscovered archaeological and historical resources. In the event that previously undocumented cultural resources or human remains are discovered during any project-related ground-disturbing</p>	During construction	FHWA-CFLHD, LTBMU, NDOT, TRPA

<p>activities, the construction crew will immediately cease ground-disturbing activities in the vicinity of the find and the procedures of 36 CFR Part 800 will be implemented. A qualified archaeologist approved by FHWA-CFLHD will be consulted to evaluate the resource in accordance with Section 106 and TRPA guidelines. If the discovered resource is determined to be significant per NRHP and TRPA criteria, mitigation measures consistent with the TRPA Code will be devised and a mitigation plan submitted for approval by the FHWA-CFLHD, NDOT, LTBMU, and TRPA. Any necessary archaeological excavation and monitoring activities will be conducted in accordance with prevailing professional standards and the Federal Secretary of the Interior's Standards and Guidelines for Identification of Cultural Resources and Professional Qualifications (National Park Service 1983). Mitigation, in accordance with a plan approved by FHWA-CFLHD, NDOT, LTBMU, and TRPA will be implemented before ground-disturbing work in the area of the resource find can continue.</p> <p>The State of Nevada Revised Statutes Section 383.170 requires a person to report to the Office of Historic Preservation immediately upon discovery of a previously unreported Native American interment inadvertently disturbed by ground-disturbing activities such as construction, logging, or farming. The Office of Historic Preservation must consult immediately with the Nevada Indian Commission and notify the appropriate Indian tribe. The authorized tribe or their representative, with the permission of the landowner, must inspect the burial site and recommend an appropriate means for the treatment and disposition of the site and all associated artifacts and human remains. If the burial site is located on private land, Section 383.170 allows, at the owner's expense, the reinterment of all human remains and associated artifacts in a location not subject to further disturbance if the Indian tribe fails to make a recommendation within 48 hours after it receives notification of the find.</p>		
Hydrology and Water Quality		
<p>MM BMP-1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP will be prepared by a qualified SWPPP practitioner and/or a qualified SWPPP developer that identifies water quality controls consistent with TRPA and Nevada Division of Environmental Protection (NDEP) requirements, and will ensure that runoff quality meets TRPA water quality requirements under the TRPA Code, and maintains beneficial uses of Lake Tahoe, as defined by Section 445A.191 of the Nevada Administrative Code (NAC). The SWPPP will describe the site controls, erosion and sediment controls, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures, and management controls unrelated to stormwater. Best management practices (BMPs) identified in the SWPPP will be implemented during all site development activities. The following will be required elements of the SWPPP:</p> <p>(1) Temporary BMPs to prevent the transport of earthen materials and other construction waste materials from disturbed land areas, stockpiles, and staging areas during periods of precipitation or runoff, including: filter fence, fiber roll, erosion control blankets, mulch</p>	Prior to construction, during construction	FHWA-CFLHD, LTBMU, NDOT, TRPA

<p>(such as pine needles and wood chips).</p> <p>(2) TRPA pre-grade inspection a minimum of 48-hours prior to commencement of construction related activities to ensure proper and adequate installation of the temporary erosion control measures.</p> <p>(3) Designated staging and storage areas will be protected by construction fencing and/or silt barriers, as appropriate. Following project completion, all areas used for staging will be restored to preconstruction conditions.</p> <p>(4) Temporary BMPs to prevent the tracking of earthen materials and other waste materials from the project site to offsite locations, including stabilized points of entry/exit for construction vehicles/equipment and designated vehicle/equipment rinse stations, and sweeping.</p> <p>(5) Temporary BMPs to prevent wind erosion of earthen materials and other waste materials from the project site, including routine application of water to disturbed land areas and covering of stockpiles with plastic or fabric sheeting.</p> <p>(6) Earthmoving activities will be limited to May 1 through October 15, unless a grading ordinance exemption is granted by TRPA. At the end of the grading season or before completion of the project, all surplus or waste earthen materials from the project site will be removed and disposed of at a TRPA-approved disposal site or stabilized on-site in accordance with TRPA regulations.</p> <p>(7) A spill prevention and containment plan will be prepared and implemented. Project contractors will be responsible for storing on-site materials and temporary BMPs capable of capturing and containing pollutants from fueling operations, fuel storage areas, and other areas used for the storage of hydrocarbon-based materials. This will include maintaining materials on-site (such as oil absorbent booms and sheets) for the cleanup of accidental spills, drip pans beneath construction equipment, training of site workers in spill response measures, immediate cleanup of spilled materials in accordance with directives from the TRPA and the NDEP, and proper disposal of waste materials at an approved off-site location that is licensed to receive such wastes.</p> <p>(8) Protective fencing, as needed, to prevent damage to trees and other vegetation to remain after construction, including tree protection fencing and individual tree protection such as wood slats strapped along the circumference of trees.</p> <p>(9) Daily inspection and maintenance of temporary BMPs. The contractor will be required to maintain a daily log of Temporary Construction BMP inspections and keep the log on site during project construction for review, as needed.</p>		
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<p>(10) Develop and implement a Rain Event Action Plan as a component of the SWPPP that will include monitoring the weather on a daily basis and implementing pre-defined action within the SWPPP to avoid discharges during rain events in the construction period. During periods of inclement weather, and when the weather forecasts exceed a pre-defined threshold for forecasted precipitation (typically 60 percent or greater), active areas of construction will be stabilized and all earth moving activities will cease.</p>		
<p>MM BMP-2. Develop Permanent BMPs to control stormwater runoff and minimize erosion and the transport of sediment and other pollutants of concern to Lake Tahoe. Permanent slope stabilization measures will be designed and implemented to address the fill slopes associated with the widening along US 50 and the new access road. These measures will be aligned with the proposed road grades and may consist of a combination of bio-technical and revegetation methods such as soil restoration, soil amendment, revegetation with native seed mixes, planted geotextiles, or other features to be developed during final design. On relatively flat existing side slopes (less than 20 percent), stormwater would runoff as sheet flow onto the adjacent downstream pervious area and naturally infiltrate.</p> <p>Place riprap aprons at culvert outlets to dissipate flow energy before naturally infiltrating into the surrounding well drained wooded areas. Coordination with LTBMU, NDOT, and TRPA will be ongoing during permanent BMP design.</p>	Prior to construction	FHWA-CFLHD, LTBMU, NDOT, TRPA
<p>MM BMP-3. Provide mitigation for additional impervious pavement. Based on preliminary design, the project would result in the addition of 26,136 square foot (0.6 acre) of impervious pavement that could alter runoff patterns. The addition of impervious pavement will continue to be evaluated as the project progresses towards final design. The TRPA Code of Ordinances requires that any project that results in the creation of additional impervious coverage will require Water Quality Mitigation. FHWA-CFLHD will continue to work with LTBMU on water quality mitigation opportunities located on Forest Service land.</p>	Prior to construction, during construction	FHWA-CFLHD, LTBMU, TRPA
Recreation		
<p>MM REC-1. Use signage and/or additional public information methods to notify Stateline-to-Stateline trail users that access will be modified during construction. Use conflicts will be reduced or minimized on the Stateline-to-Stateline trail through use of informational signage posted at the Round Hill Pines Resort and trailheads to alert users of possible obstacles or changes in access. These notifications can also be posted on the LTBMU website.</p>	Prior to construction, during construction	FHWA-CFLHD, LTBMU
Noise		
<p>MM NOS-1. Implement noise controls on construction equipment. Construction equipment will be properly maintained and equipped with noise control, such as mufflers, in accordance with manufacturers' specifications.</p>	During construction	FHWA-CFLHD

MM NOS-2. Implement construction hour limits. Typical construction activities will be limited to the hours between 8:00 a.m. and 6:30 p.m., during which such activities are exempt from noise levels identified in Chapter 68 of the TRPA Code of Ordinances. Emergency work to protect life or property is exempt from these hourly limits and applicable noise standards. If construction activities must run past exempted hours (e.g., during wastewater line relocation or highway closures), any nearby sensitive receptors (less than 200 feet from those activities) will be given at least 1 week notice of such activities.	During construction	FHWA-CFLHD
MM NOS-3. Consider equipment placement and operation during construction. Construction equipment will be arranged to minimize travel adjacent to noise-sensitive receptors and turned off during prolonged periods of non-use. Construction equipment will be staged and construction employee parking will be located in designated areas only. All construction equipment and vehicles used for project construction will be fitted with the factory installed muffling devices and will be maintained in good working order. Should noise complaints be received, FHWA-CFLHD and/or the project contractor will attempt to respond within 1 working day and to resolve noise complaints as soon as possible.	During construction	FHWA-CFLHD
Air Quality		
MM AQ-1. Reduce construction-generated emissions. The contractor will implement practices that minimize exhaust and fugitive dust emissions during construction. Measures to be implemented will comply with TRPA and NDEP. More specifically, the measures will conform with: NAC Sections 44B.7665 and 44B. 22037 related to opacity (visible emissions) for heavy duty equipment and fugitive dust; <ul style="list-style-type: none"> • Section 33.1 of the TRPA Code related to seasonal limitations on construction and dust control measures; • Section 65.1.8 of the TRPA Code related to vehicle idling time limitations; • TRPA's Standard Conditions of Approval for Grading Projects (Attachment Q) 	During construction	FHWA-CFLHD, TRPA

EXHIBIT

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EXHIBIT

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Feedback sought for US 50 Tahoe East Shore traffic plan

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Staff Report

STATELINE, Nev. — The Nevada Department of Transportation will host information booths to gather public feedback on initial concepts for future traffic improvements to U.S. Highway 50 on Lake Tahoe's East Shore.

The following locations will be available for study information and to provide feedback:

11 a.m. – 1 p.m. Wednesday, March 30, at Douglas County Public Library, 233 Warrior Way, Glenbrook; 4–6 p.m. Thursday, March 31, at Lake Tahoe Visitors Authority, 169 US 50, Stateline; 10 a.m. to noon April 2, at Kahle Community Center, Kingsbury Grade, Stateline

Those interested can also visit dot.nv.gov/US50EastShore for study information.

Those requiring special accommodations to access study information can contact 702-232-5288.

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Through the U.S. 50 Corridor Management Plan, NDOT is gathering public feedback and evaluating the highway between Spooner Summit and the Nevada-California border at Stateline. A first round of public information booths, held last summer, gathered community feedback. The public feedback, including challenges with speeding and access to and from the highway, was then used to develop high-level concepts for highway improvements.

The spring 2022 listening tour will offer an opportunity for community members to provide input on these initial concepts before they are finalized into vehicle, transit and multi-modal strategies to enhance roadway travel and safety for all. The resulting plan, completed in late 2022, will provide a high-level vision for potential options to improve traffic safety and mobility for all transportation types. The public will also have an opportunity to provide feedback before the plan is finalized.

The plan will be developed cooperatively with the Tahoe Regional Planning Agency, Tahoe Transportation District, USDA Forest Service Lake Tahoe Basin Management Unit, Douglas County and other stakeholders, and will be consistent with state and regional transportation and environmental goals established in the Lake Tahoe Bi-State Compact.

Average daily peak-season traffic on the highway has grown from 15,000 vehicles daily in 2014 to nearly 20,000 in 2019. During a recent 4-year period, crash rates were more than 50% higher on US 50 between Elks Point Road and Glenbrook Drive when compared with other similar highways across the state.

Amid increasing traffic, NDOT also plans additional highway improvements in coming years. Beginning this year, NDOT will install a traffic signal at the intersection of US 50 and Warrior Way. By controlling all directions of travel, the signal will help provide designated and safer access to and from the highway.

Within the coming five years, the department also plans to repave and rehabilitate approximately 13 miles of US 50 between Stateline and Spooner Summit for a smoother and safer drive.

Additional state highway information is available at dot.nv.gov or by calling 775-989-7000.



STRAIGHT TALK



A view of U.S. Highway 50 and Lake Tahoe from the top of Cave Rock on the East Shore
Getty Images

Source: NDOT

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